DOCUMENT RESUME

ED 034 369 40 EC 004 763

AUTHOR	Brill, Richard G.; And Others
TITLE	Pilot Program with Seriously Emotionally Disturbed Deaf Children. Final Report.
INSTITUTION	California School for the Deaf, Riverside.
SPONS AGENCY	Office of Education (DHEW), Washington, D.C. Bureau of Research.
BUREAU NO	BR-6-2422
PUB DATE	Jun 69
GRANT	OEG-4-7-062422-0208
NOTE	348p.
EDRS PRICE	EDRS Price MF-$1.50 HC-$17.50
DESCRIPTORS	Adjustment (to Environment), Arithmetic, *Aurally Handicapped, *Behavior Change, *Case Studies (Education), Clinical Diagnosis, *Emotionally Disturbed, *Exceptional Child Research, Parent Attitudes, Parent Counseling, Program Evaluation, Reading Achievement, Reinforcement, Student Evaluation

ABSTRACT

To modify behavior and teach basic skills and subject matter, 16 emotionally disturbed deaf boys were involved in a pilot project to enable them to return to regular classes. The program featured a small staff-pupil ratio, application of behavior modification techniques, engineered instruction, individualized self-instructional curriculum materials, coordinated classroom and dormitory activities, manual communication, and parent education. Results showed that changes in class conduct and selfcontrol were significant; reading skills showed good improvement; significant gains were made in arithmetic; interpersonal rapport improved among the boys and also with adults; and parents were enthusiastic about changes in their children. One of the 16 boys is deceased, one returned to a psychiatric hospital, and eight of the remaining 14 became successful participants in regular classes for the deaf. Extensive appendixes, tables, lists of figures pertaining to the project results, and case studies are included. (Author/JM)

PA-40

ED034369

EC004763E

FINAL REPORT
Project No. 6-2422
Grant No. OEG-4-7-062422-0208

Pilot Program With Emotionally Disturbed Deaf Children

RICHARD G. BRILL, Ed.D.
California School for the Deaf, Riverside
3044 Horace Street
Riverside, California 92506

FRANK DAVIS, Ph.D.
University of California, Riverside

ROBERT K. LENNAN
California School for the Deaf, Riverside
3044 Horace Street
Riverside, California 92506

June 1969

U. S. DEPARTMENT OF
HEALTH, EDUCATION, AND WELFARE
Office of Education
Bureau of Research

BR 6-2422
PA-40
OE/BR

U.S. DEPARTMENT OF HEALTH, EDUCATION & WELFARE
OFFICE OF EDUCATION

THIS DOCUMENT HAS BEEN REPRODUCED EXACTLY AS RECEIVED FROM THE PERSON OR ORGANIZATION ORIGINATING IT. POINTS OF VIEW OR OPINIONS STATED DO NOT NECESSARILY REPRESENT OFFICIAL OFFICE OF EDUCATION POSITION OR POLICY.

FINAL REPORT
Project No. 6-2422
Grant No. OEG-4-7-062422-0208

PILOT PROGRAM WITH SERIOUSLY EMOTIONALLY DISTURBED DEAF CHILDREN

Richard G. Brill, Ed.D.
California School for the Deaf, Riverside

Frank Davis, Ph.D.
University of California, Riverside

Robert K. Lennan
California School for the Deaf, Riverside

June 1969

The research reported herein was performed pursuant to a grant with the Office of Education, U. S. Department of Health, Education, and Welfare. Contractors undertaking such projects under Government sponsorship are encouraged to express freely their professional judgment in the conduct of the project. Points of view or opinions stated do not, therefore, necessarily represent official Office of Education position or policy.

U. S. DEPARTMENT OF
HEALTH, EDUCATION, AND WELFARE

Office of Education
Bureau of Research

CONTENTS

Acknowledgements iii

Summary. 1

Chapter I - Introduction 2

Chapter II - Methods 9

Chapter III - Findings and Analysis. 31

Chapter IV - Individual Case Studies 63

Chapter V - Evaluation of Project by Parent. 225

Chapter VI - Conclusions and Recommendations 234

Appendixes

Appendix A - Graduate Student's Rankings of Narrative Reports. 244

Appendix B - Form Used for Staff Ratings 252

Appendix C - Reading Achievement Scores for Children in Regular Classes at California School for the Deaf, Riverside 254

Appendix D - Parent Attitude Research Inventory. 257

Appendix E - California Psychological Inventory (CPI) Profiles of Parents 277

Appendix F - Parent Rating Forms 311

Appendix G - Language Course of Study for Pilot Project. . 318

Appendix H - Dissemination of Information on the Pilot Project for Seriously Emotionally Disturbed Deaf Boys at the California School for the Deaf at Riverside. 336

References 339

LIST OF TABLES

Table		Page
1	Pooled Ranks Assigned to the Ten Anecdotes Drawn From Three Comparison Groups	33
2	Ranks of Eleven Subjects Across Four Blocks of Behavior Sampling	37
3	Post Hoc Trend Analysis Following Friedman Analysis of Variance	37
4	Distribution of Unacceptable-Acceptable Ratings for the Eight Judges Rankings Comparison Groups. . . .	38
5	Number of Items Changing Incidence From Winter 1967 to Spring 1968.	40
6	Data for Wilcoxen Test of Decrease in Incidence of Unfavorable Behavior.	42
7	Evaluation of Relationships of 11 Project Boys with Adults and Peers by Staff Rating Scale.	48
8	Reading Achievement Scores for Subjects by Class. . . .	51
8A	Arithmetic Achievement Scores for Subjects by Class . .	53
9	Incidence of Behaviors Signaling Teacher Style and Classroom Climate.	55
10	California Psychological Inventory Test-Retest Comparison	61
11	Ratings of Parent Program	229
12	Aspects of Program Judged Most Helpful to Parents . . .	231
13	Aspects of Program Judges Most Helpful to Children. . .	232

LIST OF FIGURES

Figure		Page
1	Comparison of Ranks Assigned to Ten Episodes at the Beginning of the Project, Ten Episodes at the End, and Ten Occurring in Regular Deaf Classes.	35
2	Distribution of Ranks Assigned to Staff Narrative Reports.	39
3	Comparisons of Rated Gains in Educational Goals for Group of Eleven Continuing Subjects.	45
4	Distance Placed Between Four Family Oriented Dyads by Nine Project Boys at Three Testings and a Contrast Group of 16 Deaf Boys	47
4A	Profile of Parent Attitude Scales	59
5	Distribution of Ranks Assigned to Anecdotes. Subject No. 1.	69
6	Comparisons of Related Gains in Educational Goals for Subject No. 1.	70
7	Distribution of Ranks Assigned to Anedotes. Subject No. 2.	79
8	Comparisons of Related Gains in Educational Goals for Subject No. 2.	80
9	Distribution of Ranks Assigned to Anecdotes. Subject No. 4.	88
10	Comparisons of Related Gains in Educational Goals for Subject No. 4.	89
11	Distribution of Ranks Assigned to Anecdotes. Subject No. 5.	97
12	Comparisons of Related Gains in Educational Goals for Subject No. 5.	98
13	Distribution of Ranks Assigned to Anecdotes. Subject No. 7.	106
14	Comparisons of Related Gains in Educational Goals for Subject No. 7.	107

15 Distribution of Ranks Assigned to Anecdotes. Subject No. 9. 114

16 Comparisons of Related Gains in Educational Goals for Subject No. 9. 115

17 Distribution of Ranks Assigned to Anecdotes. Subject No. 10 122

18 Comparisons of Related Gains in Educational Goals for Subject No. 10 123

19 Distribution of Ranks Assigned to Anecdotes. Subject No. 12 130

20 Comparisons of Related Gains in Educational Goals for Subject No. 12 132

21 Distribution of Ranks Assigned to Anecdotes. Subject No. 14 137

22 Comparisons of Related Gains in Educational Goals for Subject No. 14 138

23 Distribution of Ranks Assigned to Anecdotes. Subject No. 16 147

24 Comparisons of Related Gains in Educational Goals for Subject No. 16 148

25 Distribution of Ranks Assigned to Anecdotes. Subject No. 19 155

26 Comparisons of Related Gains in Educational Goals for Subject No. 19 156

27 Comparisons of Related Gains in Educational Goals for Subject No. 3. 163

28 Comparisons of Related Gains in Educational Goals for Subject No. 6. 168

29 Distribution of Ranks Assigned to Anecdotes. Subject No. 8. 175

30 Comparisons of Related Gains in Educational Goals for Subject No. 8. 176

31 Distribution of Ranks Assigned to Anecdotes. Subject No. 13 187

32 Comparisons of Related Gains in Educational Goals for Subject No. 13. 188

33 Comparisons of Related Gains in Educational Goals for Subject No. 15. 194

34 Distribution of Ranks Assigned to Anecdotes. Subject No. 17. 200

35 Comparisons of Related Gains in Educational Goals for Subject No. 17. 201

36 Comparisons of Related Gains in Educational Goals for Subject No. 18. 209

37 Distribution of Ranks Assigned to Anecdotes. Subject No. 20. 215

38 Comparisons of Related Gains in Educational Goals for Subject No. 20. 216

39 Distribution of Ranks Assigned to Anecdotes. Subject No. 21. 223

40 Comparisons of Related Gains in Educational Goals for Subject No. 21. 224

ACKNOWLEDGEMENTS

The success of this program was due to the diligent and enthusiastic efforts of the project staff and the cooperation of members of the staff of the California School for the Deaf at Riverside.

We wish to thank the various consultants for their contributions in carrying out the in-service training of the project staff, their assistance during the two years of the study, and their help in preparing the final report.

Recognition is also due for the conscientious service rendered in data gathering by the student research assistants from the University of California at Riverside.

SUMMARY

The Pilot Project for emotionally disturbed deaf boys was initiated to modify behavior as well as to teach basic skills and subject content to sixteen emotionally disturbed deaf boys enabling them to return to regular classes for the deaf. Features of the program were a small staff-pupil ratio, application of behavior modification, engineered instruction, individualized self-instructional curriculum materials, coordinated classroom and dormitory activities, manual communication, and parent education. Pupils in the sample were all educational losers. None had success in regular school attendance; several had been excluded. Analysis of data shows that objectives were reached in most areas. Changes in class conduct and self-control were significant and closely approached that of the contrast sample. Gains in reading were significant and larger than the contrast sample. Significant gains were also made in arithmetic. Improvement in interpersonal rapport is greatest among peers when seen by the boys, and better with adults when reported by the staff. Parents were enthusiastic about changes in the child, but made no meaningful changes in their own personal dimensions. Of the original sixteen boys, one is deceased, one required return to a psychiatric hospital during the first year, and eight of the remaining fourteen are successful participants in regular classes for the deaf. One of the five replacement subjects who entered the project in the second year is also a successful participant in a class for the deaf.

CHAPTER I

INTRODUCTION

General Problem of Multiply Handicapped Deaf

"The frontier in the field of deafness in the latter part of the Twentieth Century lies in the field of the multiple handicapped."

"The Nineteenth Century saw the establishment of schools for the deaf, the beginning of teacher training on a professional basis, and the establishment of definite patterns of teaching the deaf. The first part of this century saw the establishment of electronic amplification in our schools. The problem now, as I see it, is in the area of deafness with additional handicaps." (Doctor, 1959)

This statement was made by Dr. Powrie V. Doctor, the editor of the American Annals of the Deaf, at the Convention of American Instructors of the Deaf in Colorado in 1959.

The report to the Secretary of Health, Education and Welfare by his Advisory Committee on the education of the deaf, commonly known as the Babbidge Report (1965) states the following, "The education of the multiply handicapped deaf child is one of the major problems in the field. As modern medical care has improved, more children with added defects have survived the prenatal and birth trauma. There is a reasonable consensus among educators of the deaf that in cases where regular classroom work in schools and classes for the deaf is seriously impeded by the inclusion of multiply handicapped children or where the instruction is insufficiently specialized to meet the needs of the multiply handicapped child, specialized classes should be provided."

The size of the problem is extensive, but precise figures for the nation as a whole are not known.

In the spring of 1968, a comprehensive study of the incidence of deaf children with additional handicapping conditions in the State of California was made by Calvert. His study found a total of 984 deaf children under the age of 15 years with at least one other major handicap in addition to deafness, 273 had two handicaps in addition to deafness, and 280 had three or more handicaps in addition to deafness. A projection of the total number of multi-handicapped deaf children in California at the time resulting from the rubella epidemics of 1964-1965 raised this total of 984 deaf children to a total of 1,732 children as an estimate of the number of multi-handicapped deaf children from all causes in California as of May 1, 1968. (Calvert, 1968)

While the above study took place at the same time as this reported study, it verifies the significance of this problem in terms of numbers.

Educators of the deaf began to be concerned with the problem of deaf-blind children as early as 1851 and programs for deaf-blind children were established in the 1930's. In 1967, there were a total of 105 pupils in programs for the deaf and blind in six states. (Annals, 1967)

Professional articles concerned with the education of the mentally retarded deaf began to appear in the American Annals of the Deaf in 1896. Again, in 1967, there were 224 pupils enrolled in special programs for mentally retarded deaf children in state hospitals in five states.

Also reported in 1967 were 29 children enrolled in special programs for cerebral palsy/orthopedically handicapped deaf children in two states. (Annals, 1967)

In 1954, the Conference of Executives of the American Schools for the Deaf authorized the editor of the American Annals of the Deaf to publish lists of schools and classes established for deaf children with additional handicaps. In 1957, the American Instructors of the Deaf had a special section concerned with the multiply handicapped deaf for the first time at its biennial convention.

The term "multiply handicapped deaf children" is an omnibus term that would include children who are deaf and mentally retarded, deaf and emotionally disturbed, deaf and visually handicapped, deaf and orthopedically handicapped, and deaf children with a combination of these and other handicapping conditions. As reported above, some programs have been established for deaf-visually handicapped children, deaf-mentally retarded children, and deaf-orthopedically handicapped children. Little is known about appropriate techniques that can be used to educate deaf-emotionally disturbed children.

A group of emotionally disturbed deaf children was described by Withrow (1963) at the International Congress on the Education of the Deaf in Washington, D. C. He stated that it was estimated that approximately 1% of the school age deaf population has emotional problems which interfere with educational placement and progress.

Illustrative case histories were presented by Mulholland in a paper published in the Proceedings of the American Instructors of the Deaf meeting in Oregon in 1961. Other cases were presented by Myklebust at the meeting of the Conference of Executives in Evanston, Illinois in 1960, and published in the Minutes of the 32nd Meeting of the Conference of Executives. A paper by Lowell presented at the Convention of American Instructors of the Deaf in Oregon in 1961 emphasized the fact that little is known about the proper treatment of multiply handicapped deaf children or how to teach them.

Mulholland (1961) states that diagnostic teaching is necessary for multiply handicapped children. "The role of the teacher is not that of a diagnostician nor yet that of a psychologist, but her observations of the child's learning difficulties contributes significantly in clarifying for both the school and the home the appropriate program for education and management. It is she whose continuing evaluation of the neurologically hearing impaired deaf child facilitates the diagnosis of more subtle behavioral deviations as well as equally subtle aberrant learning patterns of the child who does not progress academically."

Vernon, in the Annals in 1961, published an article concerned with the symptoms and causes of neurological impairment of deaf children with a proposed diagnostic procedure.

These illustrate that most of the research so far has been concerned with diagnosis and incidence, but there has been little reporting of research or demonstrations as to how to benefit educationally the multiply handicapped deaf child and particularly the emotionally disturbed deaf child.

Verification of the significance of this area was brought out by Calvert's study in 1968. Of the 984 multiply handicapped deaf children under the age of fifteen years who were definitely identified, 431 of the children had one handicap in addition to deafness. Of this group, the largest number, 127, were those with emotional problems, while the second largest group composed of 100 were those who were mentally retarded in addition to being deaf, and the third group composed of 89 had a visual handicap.

While 431 children had only one additional handicapping condition, the other 553 children had two or more handicapping conditions in addition to deafness. When the group of 984 multiply handicapped deaf children was taken as a whole, the most common handicap among all multiply handicapped deaf children in the survey was retardation with 506. Emotional disturbance was next with 422 children, while visual handicaps was third with 357 children with other categories following in order.

Educational programs have been carried on with visually handicapped deaf children and with mentally retarded deaf children, but as there is no evidence of any major work with emotionally disturbed deaf children, this indicates an area of great need.

For reporting purposes, handicapped children are categorized in terms of the particular handicapping condition they may have. It should be noted, however, that in terms of educational treatment, a person who suffers from two types of handicaps not only has the problem of both handicaps separately, but also the problem which is brought about by the particular combination of the two handicaps. (Frampton and Rowell, 1940) Thus, the total effect of the handicapping conditions is not additive, but increases geometrically.

Of all the possible combinations of multiply handicapping conditions found among deaf children, the combination of deafness and emotional disturbance presents some of the most difficult problems in terms of classroom management of the child and organization of the teaching-learning process. In addition, it is generally recognized that there is a significantly higher incidence of emotional disturbance among multiply handicapped deaf children than among children whose only handicap is deafness.

Vernon (1966) examined "the causes and nature of learning disabilities, behavior disorders, and physical defects" in a sample of 1,468 deaf children who had attended the California School for the Deaf at Riverside. The five etiological groups studied were hereditary deafness, prematurity, rubella, Rh factor, and meningitis. The prevalence rate for multiple disabilities was 71.1% among the Rh children, 67.8% of the premature group, 53.8% of the rubella group, and 38% among the meningitic children. Teacher's ratings of emotional adjustment showed the most profound emotional maladjustment among the rubella deafened with 53.7% rated below average or poor in their emotional adjustment. The percentages of below average or poor ratings for the other etiological groups studied were as follows: prematurely deafened 41.3%, Rh factor 39.3%, and meningitic 33.5%. These findings point up the need for specialized techniques of classroom management in working with deaf children who, in addition to other handicapping conditions, manifest a significantly higher degree of emotional disturbance than the so-called "normal" deaf child.

Thus, it was felt that an experimental program utilizing and adapting techniques that had proven successful in other areas of exceptionality in reducing and modifying deviant behavior in emotionally disturbed children would provide a laboratory setting for the development of techniques that might be useful, not only to teachers of deaf-emotionally disturbed children, but to teachers of other multiply handicapped deaf children as well.

Proposed Procedures

As originally conceived, the experimental study envisioned the utilization of procedures developed by Cruickshank in the experimental program in Montgomery County, Maryland. The program as described by Lippman (1956) includes the following modifications in teaching methodology, materials, and classroom environment: "1. Reduction of environmental stimuli, 2. Reduction of available space, 3. A structured school program and planned routine, 4. An increase in the amount of stimulus value contained in the teaching materials."

In addition to the above, the behavior modification techniques developed by Hewett (1967) at the Neuropsychiatric Institute, University of California, Los Angeles, and in the "Santa Monica Project" were to be utilized. The procedures developed by Hewett and others seemed to lend themselves quite well to work with deaf children since they dealt with modification of behavior in a highly concrete and systematic manner. As stated by Whelan and Haring, "There is a small but rapidly expanding accumulation of data which indicate that behavioral principles, reliably demonstrated in learning laboratories, are also applicable in managing, modifying, building, and maintaining behavior of children who function in special education classes. (Haring and Phillips, 1962; Bijou, 1964) The fundamental concept upon which these principles rest is that "behavior, normal as well as abnormal, is learned." (Whelan and Haring, 1966) Knowledge concerning behavioral principles "has clarified the nature of behavior and its consequences and has devised techniques which apply methods of a natural science to its investigation." (Skinner, 1963)

Whelan and Haring (1966) point out that a traditional expectation of teachers has been the changing or modifying of the behavior of the children entrusted to their care. There are advantages in the use of behavior modification techniques to carry out this function. The causes of deviant behavior while important, are not a primary concern for educators since they must work with exhibited, overt behavior, and not with the general, dynamic causes of that behavior. The teacher can bring about behavior changes through the use of behavior modification techniques that utilize the control of environmental consequences for the child in a systematic and consistent manner.

As the experimental program developed, it became apparent that features of both the Cruickshank and behavioral modification approaches would lend themselves quite well to the experimental study. In addition, it became apparent that other factors would have to be considered in the development of the program because of the unique problems presented by the handicapping conditions imposed by deafness and the resultant ramifications not present in other areas of exceptionality.

One such factor was the need for a program of parent education and counseling. There is a general lack of sophistication among parents of deaf children concerning the educational and psychological implications of deafness. Coupled with this is the lack of meaningful communication between the deaf child and his parents which precludes the establishment of a normal parent-child relationship. As Ackerman (1958) points out, "Health and illness are functions of the interrelation of organism and environment. The family is the basic unit of human experience; it is the primary group into which the functions of personality are integrated." If the program were to achieve optimal results, it would be necessary to include the parents as knowledgeable and perceptive working partners who could carry out in the home environment the same techniques being used in the school and dormitory settings.

Another factor was the inappropriateness of commercially available instructional materials for use with this type of child. It was necessary, therefore, to devise and develop materials that would be effective in facilitating the teaching-learning process.

In its final development the Pilot Project for Severely Emotionally Disturbed Deaf Boys included the following factors:

1. Small staff pupil ratio.

   The normal teacher-pupil ratio in classes for deaf children ranges from one to six at the primary level to one to nine or ten at the secondary level. A ratio of one to four was maintained in the experimental study because of the severity of the behavior problems of the subjects and their widely varying educational backgrounds.

   The usual ratio of dormitory counselors to children at this school is one to sixteen. The ratio maintained with the experimental group was five to sixteen.

   The small staff-pupil ratio permitted a highly individualized approach in helping the subjects overcome their emotional and educational problems.

2. Behavior modification techniques patterned after the "Engineered Classroom" as developed by Dr. Frank Hewett.

   This provided an operational framework for the systematic application of environmental consequences to modify and then maintain the behavior of the subjects.

3. The use of manual communication.

   To eliminate the frustrations caused by inadequate receptive and expressive communication and to facilitate the instructional process, the simultaneous method of communication which includes the use of fingerspelling, sign language, and speech was utilized.

4. Extensive use of "teacher-made" visual aids including overhead transparencies, 35mm color slides, and Super-Eight color movie film as teaching aids.

   These provided an increase in the amount of stimulus value contained in the teaching materials.

5. Utilization of "teacher-made" programmed instructional materials.

   The use of programmed materials was consistent with the behavior modification procedures used since they provided immediate knowledge of results and positive reinforcement for correct responses.

6. The development of a cooperative working relationship between dormitory and teaching personnel through the medium of teacher-counselor teams.

   The team provided a unified and consistent strategy in attacking the behavior and learning problems of the subjects.

7. Parent education and counseling program.

   The parent program was designed to provide a basic orientation to the educational and emotional problems imposed by deafness.

   The group sessions with a licensed family counselor were designed to explore and bring about changes in parental attitudes and provide an opportunity to discuss home management problems. The classes in manual communication facilitated more effective communication between parent and child.

Hypothesis

It was hypothesized that the program described above would be effective in bringing about behavior changes in the experimental group of sixteen emotionally disturbed deaf boys that would enable them to function successfully in a classroom setting.

If this hypothesis was correct, it would have far-reaching implications for the emotional and educational habilitation of the ever growing numbers of multiply handicapped deaf children confronting educators of the deaf.

Purpose and Limits of This Study

The following were the objectives of this pilot program:

1. To explore the best teaching techniques to be used to bring about behavioral change in seriously emotionally disturbed deaf children that would result in these children being able to live harmoniously with others and to learn in a small group situation.

2. To explore the appropriate program and activities for these children in their living arrangements to bring about change as stated above.

3. To explore the effect of parental education and counseling in bringing about change in the behavior of these children.

Chapter II

METHODS

Setting

The California School for the Deaf is located sixty-five miles east of Los Angeles in the City of Riverside. It has a total student population of 545 children ranging in age from five to twenty-one.

Facilities

Classroom and dormitory facilities for the experimental program were constructed in existing buildings on campus. A part of the ward space in the infirmary was converted for use as a dormitory. Four four-bed wards were partitioned to provide eight rooms with double occupancy.

Four classrooms, a teacher's workroom, and a conference room were constructed within a small gymnasium. Two observation booths equipped with one-way mirrors and sound amplification equipment were built to facilitate observation of the classrooms by student observers from the University of California at Riverside.

Office space was provided for the project supervisor and the project secretary.

Staff

The project staff consisted of six dormitory counselors, four teachers, the project director, a supervisor, and a secretary. Five of the dormitory counselors and all of the teachers were volunteers from the regular staff.

The teaching staff consisted of:

Teacher "S"	A male teacher with three years of prior teaching experience who has deaf parents.
Teacher "W"	A deaf woman in her first year of teaching.
Teacher "M"	A hearing woman with one year of prior teaching experience.
Teacher "C"	A hearing woman who, although not trained to teach the deaf, had some prior experience in working with emotionally disturbed children in a therapy program under the supervision of a child psychiatrist and had served as a teacher's aid at the California School for the Deaf, Riverside.

The original dormitory staff consisted of two men and two women with an average of four years of prior experience and one woman with no prior experience. A sixth counselor was added to the staff early in the first year.

The dormitory and teaching staffs were under the supervision of the project supervisor who had fifteen years of prior experience working with the deaf.

Supporting Staff

In addition to the full time project staff, services of the school audiologist, Mr. Erpel Garrett, and the school psychologist, Mr. Don Campbell, were available. They performed the audiometric and psychological evaluations of all subjects.

Consultant Staff

Pediatric examinations of all subjects were performed by Dan Baernstein, M. D., a member of the faculty at the Medical School, Loma Linda University, Loma Linda, California.

Neurological examinations were performed by Guy Hunt, M. D., also a member of the faculty at the Medical School, Loma Linda University, Loma Linda, California.

Frank Hewett, Ph.D., Chairman of the Department of Special Education at University of California, Los Angeles, and a member of the staff at the Neuropsychiatric Institute, served as consultant in the use of behavior modification procedures which were patterned after those developed by him at the Neuropsychiatric Institute School and in the Santa Monica Project.

Frank Davis, Ph.D., Director of the Department of Special Education at the University of California, Riverside, served as educational research consultant for the project. He coordinated the data gathering procedures carried out by student observers from the University of California, Riverside, and made a statistical analysis of the data gathered.

Donald Perrin, M. A., Assistant Professor in the Department of Instructional Technology at the University of Southern California, served as consultant in the development and utilization of instructional media and programmed instruction.

Donald MacMillan, Ed.D., Professor in the Department of Special Education at University of California, Riverside, served as consultant in the development and utilization of behavior modification techniques for parents of the children in the project.

Allan Kirkpatrick, M. A., Professor at Riverside City College and licensed marriage and family counselor, served as leader of the group therapy sessions which were provided as a part of the parent program.

Frank Wills, M. D., Child Psychiatrist in private practice in the city of Riverside, served as psychiatric consultant.

Staff Training

The month of September, 1966, was spent in preparation of teaching materials and in-service training of the staff. A course of study in language dealing with the areas of self, family, school and community was formulated by the teaching staff to deal with the basic communication needs of the subjects. Mr. Donald Perrin, Assistant Professor of Education in the Department of Instructional Technology at the University of Southern California, gave a short course in the preparation of programmed instructional materials to the teaching staff. He also provided instruction in the development and use of various visual materials. The entire project staff took part in a two day workshop on learning theory, motivation and reinforcement which was conducted by Dr. Madeline Hunter, Principal of the University Elementary School at the University of California, Los Angeles.

A visit was made to the school at the Neuropsychiatric Institute where Dr. Frank Hewett described the methodology he had developed to bring about behavioral changes in emotionally disturbed children through the use of behavior modification in an "Engineered Classroom". The project supervisor had taken a course earlier taught by Dr. Hewett which had dealt with these same concepts in depth.

Criteria for Selection of Subjects

A. All subjects were male.

B. The chronological age range was from seven through twelve.

Preliminary planning had anticipated the chronological age range would be from eight to ten, but it was necessary to expand the age range to find sufficient subjects who would meet the other criteria.

C. All subjects were prelingually deaf and had hearing levels of 65 db or worse in the better ear, which implies deafness (anacusis) for educational purposes. (Davis, Silverman, 1960) Deafness is the traditional term for a severe or complete impairment of hearing. For adults it should only be used if the hearing level for speech, estimated as recommended above, is 82 db (American Standard) or worse. This implies a hearing loss sufficient to make auditory communication difficult or impossible without amplification. For children the cutoff level is often set as low as 60 db for educational purposes. "Deafness" usually implies that the abnormality is peripheral and is primarily a loss of auditory sensitivity.

D. As far as could best be determined, all subjects had a minimum intelligence level of dull-normal or a performance I. Q. of 85 or above obtained through the use of an objective, non-verbal test. In some cases, it became necessary to resort to a subjective evaluation of intelligence where emotional problems prevented satisfactory performance in the testing situation.

E. No subject suffered from gross neurological dysfunction as determined by both a neurologist and a pediatrician.

F. All subjects manifested symptoms of such great emotional disorder that they could not be taught in any school or class for deaf children as presently organized.

G. The subjects in this study were boys whose apparent handicapping conditions were a combination of prelingual deafness and emotional disturbance.

Sample Selection Procedures

The subjects selected for the project were obtained from the following sources:

1. Children who had previously applied for admission to the California School for the Deaf at Riverside and had not been admitted because of their emotional problems.

2. Children who were referred as possible candidates by day school and day class programs for the deaf in Southern California.

3. Children reported to be patients at the Neuropsychiatric Institute in Los Angeles and at Camarillo State Hospital.

4. Children enrolled in the regular program in the California School for the Deaf at Riverside who had emotional problems which were preventing satisfactory adjustment to the normal school and dormitory routine.

The names of approximately fifty boys were obtained from these available sources. The records of these children were examined to determine whether they met the criteria which had been established and an investigation was made to determine if they still resided in Southern California. This initial screening procedure reduced the number of possible prospects to twenty-six. The project supervisor and the school's psychologist visited the homes of these remaining children to evaluate them for possible admission to the project. The rationale for carrying out the evaluation process in the home was the assumption that better test results could be obtained if the testing procedures were undertaken in a familiar and nonthreatening environment. This assumption proved to be true as shown by the comparison of the test results obtained in this manner with the results of testing previously done at the school. These visits also provided an opportunity to observe the home environment. It was also felt that the parents would be more open and relaxed in discussing their children when interviewed in the familiar surroundings of their own homes.

In each case the evaluation took place either in the child's bedroom or, if no other table was available, in the kitchen of the home. No other individual, other than the examiner, was present during the testing situation.

During each evaluation period an attempt was made to administer the Leiter International Performance Scale (1948 Revision). This intelligence test was chosen for several reasons: it has good interest appeal, it can be used to test relatively disturbed deaf children who could not otherwise be tested at all, and timing is not a main factor.

An attempt was made to administer the Draw-A-Person test because it is felt that this simple, non-verbal test is a good screening device for identifying very severe emotional problems, and is probably the best projective personality test available for deaf children.

In isolated cases, particularly with the more mature youngsters, the Bender-Gestalt test and the Raven-Progressive Matrices were also administered.

Although the Bender-Gestalt test is an inadequate instrument for personality evaluation, it is relatively good for detecting organic brain injury. For this reason, this test was included.

The Raven Progressive Matrices was used as a second test to substantiate the Leiter Performance Scale scores. The advantage of this test is that it is very easy to administer and score, and it takes very little time. Since this test yields extremely invalid test scores of impulsive deaf children, who may tend to respond randomly rather than with any degree of accuracy at all, the use of scores earned on this test depended largely on the examiner's assurance that the child had demonstrated application to other testing procedures.

All of the above mentioned tests are non-verbal in nature and are thus appropriate for children who are completely lacking or severely deficient in verbal skills.

In addition to the home visit, the project supervisor and the psychologist went to the local school in which the child was currently enrolled or had been enrolled prior to exclusion. During these visits the child's teacher and the school's administrator were interviewed concerning the child's academic progress and behavior and their assessment of the home environment and of the attitudes of the parents toward the child and the school.

The child's cumulative file was also reviewed to obtain other pertinent information. This information included such things as psychological evaluations, narrative reports, achievement test scores and school grades.

Replacement of Subjects

It was determined before the study started that if any of the original sixteen subjects were lost to the program during the course of the study that they would be replaced with others so that the number would remain at sixteen. At the end of the first year, it was found that three subjects were able to be admitted to regular classrooms for the deaf, one subject had to be dropped from the program and returned to the state mental hospital where he had been a patient before being admitted to this program, and one subject died during the summer between the first and second year of the study. The other eleven subjects continued in the study for the second year and five additional subjects were brought into the study for the second year to maintain the total number of sixteen. Therefore, a total of twenty-one subjects participated in the study with eleven subjects participating for the full two years, three subjects for the first year only, five subjects for the second year only and two subjects being lost to the study.

Educational Backgrounds of Subjects

N	
2	Patient in a state hospital for the mentally ill with no prior enrollment in any educational program.
1	Patient in a state hospital for the mentally ill with prior enrollments at the California School for the Deaf, Riverside, and in a day class for the deaf.
1	Workshop for mentally retarded children and patient in a state hospital for the mentally retarded (3 months).
4	Formerly enrolled in a day class for the deaf, but had been excluded because of emotional problems.
5	Enrolled at the California School for the Deaf, but having severe emotional problems that were preventing satisfactory academic and social progress.
8	Enrolled in day school or day class programs for the deaf, but referred for admission to

N	
	the study because of emotional problems that were causing consistent academic and social failure.
	Etiologies of Subjects
12	Unknown (3 of these were from Rh incompatible parents. One was a possible Waardenburg's Recessive Syndrome.)
2	Spinal meningitis at seven months.
2	Rubella
2	Prematurity
2	Pre-natal influence (mother sustained infection during pregnancy).
1	Thyroid and pituitary malfunction during infancy and reaction to subsequent medication.

Medical Examinations

All of the subjects were examined by a pediatrician and a neurologist from the staff of the Loma Linda University Medical School. In addition, electroencephalgram tracings were made at Pacific State Hospital. These were evaluated by the neurologist as part of the neurological workup. The purpose of these examinations was to detect organic dysfunctions in addition to deafness that might be causal factors to the child's emotional problems and/or impeded his learning ability.

Grouping of Subjects

Subjects were grouped according to age and educational background into two groups of five and four and one group of seven. The five oldest boys with the most extensive educational backgrounds were assigned to Teacher "S".

Four of the younger children were assigned to Teacher "W". Three of these children had no previous formal education. One of the children, although he had attended school, had never developed any communication skills. This group was completely lacking in their ability to communicate in written, oral, or manual communication.

Teachers "M" and "C" worked with the remaining children in a team teaching arrangement. Teacher "M" provided instruction in language, reading, speechreading and speech while Teacher "C" gave instruction in mathematics and reviewed the vocabulary that had been taught by Teacher "M". She also supervised the children's art and other non-academic activities. This group was housed in adjoining rooms and the children were rotated between these rooms periodically during the day.

Method of Communication

Interviews with the parents, teachers, and others who had worked with the subjects in the past indicated that the frustration caused by inadequate receptive and expressive communication was a contributing factor to their emotional problems. One of the early primary goals of the project staff was to develop communication skills in the subject that would eliminate this frustration and facilitate the teaching-learning process. For this reason, the simultaneous method of communication, using fingerspelling, sign language and speech, was utilized. Instruction in manual communication was also provided for the parents of the subjects.

Behavior Modification Procedures

Hewett (1968) defines the role of the teacher under the behavior modification methodology as that of "behavioral engineer" with the three primary functions of: (1) Defining appropriate task assignments for students; (2) Providing meaningful rewards for learning; and (3) Maintaining well defined limits to reduce maladaptive behavior.

To provide meaningful rewards for the subjects, a checkmark system was used. As each student entered the classroom in the morning, he picked up a checkcard, on which his name had been printed, from the wall rack which was located just inside the classroom door. The checkcard was a 5" x 8" card which had been divided into two hundred squares. After picking up the card, the child went to his seat and placed it on his desk where it was kept throughout the day. Checkmarks were awarded every thirty minutes to the class of older boys, and at fifteen minute intervals for the younger children. At the beginning of each time segment during the day, a task was assigned to the child by the teacher. At the end of each of these time segments, the child might earn five black checkmarks for satisfactory performance of the assigned task. Two of these checkmarks were awarded for beginning the task promptly and three for completion of the work assignment. During this same period of time the child might earn five red checkmarks for "being a student". This term, "being a student", applied to the particular behavior that the teacher was attempting to modify in that individual. The purpose in giving checkmarks in these two different colors was to point out to the child the differentiation between reward for completion of academic tasks and the reward for appropriate behavior while carrying out these tasks. The last time period of the day was devoted to totaling the number of checkmarks earned by the children. They were able to exchange their cards for rewards if they had accumulated a minimum number of checkmarks predetermined by the teacher. During the first year, the older boys were rewarded with a dime, which they used to purchase a soft drink from a vending machine in an adjoining building under the supervision of their teacher

(Teacher "S"). During the second year, this same group continued to receive dimes, but used them to pay for an excursion to a local bowling alley every Wednesday afternoon.

It was necessary initially with the young, non-verbal group of children to reward them at the end of every two hours with a lollipop or licorice whip. Later in the year, they received these rewards only twice during the day. This procedure of candy rewards was continued with this group during the second year.

The third group was awarded a bag of M & M candies at the end of each day for satisfactory completion of their checkcards. Later in the year, clear plastic piggy banks were purchased and these children were awarded a dime at the end of each day. The dimes were kept in the children's banks. On Friday afternoons, they were taken to a local variety store where they were permitted to spend the money they had accumulated during the week. During the second year, the children were taken to the variety store once every two weeks. This enabled them to accumulate enough money between visits to purchase the more expensive items in which they had become interested. Thus, in all classes over the two year period, the rewards were gradually deferred for longer periods of time.

The number of checkmarks earned each day was recorded on a graph card. This graph card was displayed on a tackboard strip above the blackboard or in the checkcard rack where it could be readily seen by the child. This provided him with constant knowledge of his performance level over an extended period of time. The children became quite interested in this monthly performance record and could recall incidents which had caused their graph to fall to a low point on certain days of the month. This was most encouraging since it indicated that the children were becoming aware of the consequences of maladaptive behavior and consciously attempting to modify this behavior. The graph card also served as a device for reporting the child's behavior to the parents when accompanied by an explanatory letter describing the checkmark and reward system.

The use of the checkcard as a behavior modification device offers many advantages to both the teacher and the student. For the teacher, it provides a way of dealing with deviant behavior in an objective, non-emotional manner. She functions in a somewhat similar manner as a foreman working in a factory. In effect, she says to the child, "I don't make the rules here. I only give checkmarks and you have not met the criteria for earning those checkmarks." Thus, she is able to modify behavior by controlling the environmental consequences of that behavior. Under this system, the teacher becomes committed to carrying out the strategies necessary to bring about changes in the child's behavior by consistently reinforcing appropriate behavior according to a predetermined schedule. This enables her to function more effectively as a behavioral engineer. It may also provide her with a diagnostic tool which will enable her to analyze those factors in her own performance which may be affecting student behavior. Examination of the students' checkcards over an extended period of time may reveal a reduction of the level of student behavior at certain times during the day and lead the teacher to examine the procedures she is following during this period that may be causing this.

For the child with learning problems it provides a structured learning environment which offers him a sense of security and direction. The teacher's expectations are clearly spelled out in highly concrete terms and he is provided with constant feedback concerning his level of performance in meeting these expectations. Consistent reinforcement of appropriate behavior serves to motivate him to behave more consistently in an appropriate manner.

All of the subjects were assessed by the teaching and dormitory staff members using a rating form based on Dr. Hewett's (1968, Pps 98-99) "Developmental Sequence of Educational Goals". This developmental sequence "delineates seven stages of learning and the goals which must be accomplished at each level if efficient learning is to occur." Through the use of this rating, the children could be described in terms of their deficits in learning readiness. The use of the sequence in effect provides a link to link diagnosis with educational operations appropriate at various levels of development. According to Hewett, "The child must learn to pay attention, respond in learning, order his behavior, explore his environment, and function appropriately as a member of a group if he is to master intellectual skills and achieve intrinsic motivation for learning."

This sequence of educational tasks is helpful in determining what the child must learn so that he can reach the state of readiness that will enable him to function successfully in a learning situation.

Hewett's Sequence of Educational Goals

Level	Tasks
Attention	Attending to assignments. Preferring reality instead of fantasy. Attending to behavior which supports learning rather than ritualistic compulsive behavior. Having appropriate interests and beliefs. Attending to the teacher. Retaining the information.
Response	Responding to assignments. Not evidencing constriction in learning performance. Responding to a wide range of learning interests. Approaching teacher and peers. Responding in a classroom setting.
Order	Following directions. Displaying controlled behavior in learning. Functioning within classroom limits. Completing assignments.
Exploratory	Acquiring complete and accurate knowledge of the environment. Independent interest in exploring the environment. Being competent in sensory-motor exploration of environment.
Social	Obtaining the approval of others. Not being overly dependent on the attention and praise of others.
Mastery	Utilizing intellectual capacity in self-care. Acquisition of intellectual and academic skills.
Achievement	Pursuing learning on a basis of intrinsic motivation.

After the dormitory staff and teachers had completed their evaluations of individual subjects, a staff conference was held to review those deficits that were causing problems for individual children and strategies were devised for overcoming them. Since most of the children exhibited a wide variety of deviant behavior, priorities were established for modifying the behaviors that were causing the most serious problems for the child, and attention to less serious behaviors was deferred. Periodic staff conferences were held to review the progress of each of the subjects and to determine the success or failure of the behavior modification procedures being used. These conferences served to unify the effort of the staff in developing, modifying, and carrying out strategies that were designed to help the child overcome his behavioral problems.

Interventions

At times, children were unable to maintain a satisfactory level of performance at their assigned tasks. When this occurred, teachers used various interventions which were designed to insure that the child would continue to earn checkmarks. These interventions are quite similar to those devised by Dr. Hewett (1967), and descend the hierarchy of educational tasks in the order of their application.

1. Send student to study booth or corner of room (Mastery Level)

   This serves to remove the child from the conditions of his immediate environment that may be influencing his behavior. It also serves to place him in a less stimulating environment, and as pointed out by Hewett (1967), "Merely allowing the child to change position and move around the room appears to interrupt a period of boredom or upset effectively."

2. Modify assignment. (Mastery Level)

   This intervention consists of changing the assigned task by making it easier, different, or perhaps, more difficult to keep the child involved. Programmed materials and visual materials were found useful as alternative assignments at this level of intervention.

3. The use of teacher approval or disapproval. (Social Level)

   This intervention involves the use of teacher counseling to remind the student of his expectations of him in relation to the assigned task and his behavior.

4. Send to activities center. (Exploratory and Order Levels)

   When it becomes apparent that the child is not able to carry out the task assigned, he may be sent to the activities center to complete a simple direction following task such as putting a puzzle together, completion of a color-by-number picture, or constructing a model. Other less structured activities carried on at this center with the younger children included drawing, modeling objects with clay, use of hammer, saw, scrap wood and nails, and viewing 35mm color slides and filmstrips. The activity center combines the functions of the exploratory and order centers described by Hewett. It was felt that an exploratory center patterned after the one utilized in the Santa Monica project would be inappropriate for the children in this study. The activities carried on in this center presume the ability to follow printed directions in carrying out rather complex activities and thus were inappropriate for use with deaf children with extremely limited verbal skills.

5. Provide individual assistance. (Attention Level)

   The four to one student-teacher ratio made possible much individual attention during the day. It also enabled the teacher to work intensively with a child under close supervision in a tutorial relationship when he was unable to carry out an assigned task independently.

6. Time out. (Non-student)

   The child surrenders his checkcard and is not able to earn checks for a predetermined period of time. During this "time out" period, the child sits in isolation outside of the classroom, usually in the supervisor's office. When the child returns to the class, he is given a task which seems appropriate for getting him back into the class routine.

7. Exclusion (Non-student)

   In rare instances where a child is unable to tolerate a "time out" period or has had to be removed from the classroom more than twice in one day, he was isolated in the dormitory under the supervision of a dormitory counselor for a full day or half a day.

Dormitory Checkcard System

The dormitory staff used a checkcard to facilitate behavior change in the children during the time when they were not in school. As originally devised, this system was oriented to specific daily tasks rather than to blocks of time as in the classroom. To qualify for a reward, children had to earn a total of ninety checks during the day. Checks were not transferable from one day to the next.

The use of checks was in keeping with the basic philosophy of the methodology being followed in the Pilot Project, namely, the use of immediate positive reinforcement for appropriate behavior whenever possible.

Tokens

Tokens were used to reward appropriate behavior as the children moved between the dormitory and classroom buildings. The tokens used were metal milk bottle caps obtained from a local dairy. These were exchanged for checkmarks when the children arrived at the school building in the morning, when they returned to school after lunch, and upon arrival at the dormitory at the close of school. Tokens were used because marking individual checkcards required too much of the counselors' time and attention.

Supervision of the children as they moved between the dormitory to school and school to dormitory was facilitated by painting 16" x 16" squares on the pavement with yellow traffic paint. These squares were sequentially numbered from one to sixteen. Four sets of these squares were provided in the following locations: 1. Outside of the dormitory, 2. At two points between the dormitory and classroom buildings, and 3. Outside of the classroom building. Each child was assigned a number and was expected to stand on his square before the group left the dormitory or the classroom building, during each of the two intermediate stops enroute, and again when the group had reached its destination. Counselors awarded a token at each stop to those children who had complied with this regulation. This procedure facilitated orderly movement of a group of children with highly aggressive, competitive, non-conforming behavior.

Tokens were also awarded for acceptable behavior five times during each meal. This was highly effective in reducing the incidence of many aggressive, acting out behaviors such as kicking under the table, fighting, teasing, and throwing food. It was also helpful in modifying the eating habits of many of the children.

In addition to the checkmarks awarded for satisfactory completion of assigned tasks, bonus checks were given for exceptionally good behavior. These were recorded by marking the letter "B" in the boxes reserved for this purpose on the last two rows of the checkcards.

In the evening after the children had finished their homework assignments and completed their preparations for bed, the dormitory checkcards were exchanged for rewards. Rewards used by the dormitory staff were soda pop and candy. If the child had earned a minimum of ten bonus checks, he also received a small plastic toy as a bonus reward.

As in the classroom, the number of checkmarks earned was recorded on a graph card which was dislayed on the child's bulletin board on the wall of his bedroom.

The following reward schedule provided for a possible total of 100 checks that might be earned by children in the Pilot Project as they moved through the day's activities. In addition to these basic checkmarks, bonus checks could be awarded by the counselor for outstanding conduct.

Dormitory Checkcard Procedure

Morning

	Get up, wash, brush teeth, comb hair	5
	Get dressed without playing	3
	Make bed	5
Token	Get coat or sweater and line up	1
Token	Go to breakfast in orderly manner	1
Tokens	Eat with good behavior	5
Token	Line up	1
Token	Return to dorm in orderly manner	1
	EXCHANGE TOKENS FOR CHECKS	
Token	Line up	1
Tokens	Go to school in orderly manner (3 stops for tokens)	3
	EXCHANGE TOKENS FOR CHECKS Total	26
	Plus bonus checks	+?

Noon

Token	Line up to go to lunch	1
Tokens	Go to dining room in orderly manner (3 stops)	3
Tokens	Eat with good behavior	5
Token	Line up	1
Tokens	Wait for children to return from infirmary	2
Tokens	Return to school in an orderly manner	3
	EXCHANGE TOKENS FOR CHECKS Total	15
	Plus bonus checks	+?

Afternoon

Token	Line up	1
Tokens	Go to dormitory in orderly manner (3 stops)	3
	EXCHANGE TOKENS FOR CHECKS	
	Change into play clothes and sit down in day room when finished (2 + 3)	5 in all
Token	Line up	1
Token	Go to playground	1

Tokens	Good behavior during play period	5
Token	Line up and go into dining room	1
	EXCHANGE TOKENS FOR CHECKS	
Tokens	Eat with good behavior	5
Token	Line up	1
Token	Go to dormitory in orderly manner	1
	EXCHANGE TOKENS FOR CHECKS Total	24
	Plus bonus checks	+?

Evening

Behavior during play period	5
Take bath	5
Put on pajamas, get clothes ready for school, put dirty clothes away	5
Do homework	5
Straighten up own room	5
Complete assigned cleanup task	5
Go to bed and remain there	5
Total	35
Plus bonus checks	+?

To be most effective, tokens or checks were awarded immediately upon completion of the task expected of the child. The purpose behind the use of tokens or checks was to give the child immediate knowledge of his level of performance. Any delay in awarding detracted from the effectiveness of the methodology used in the experiment.

A new checkcard was started just before bedtime. Initially, the night counselor had some difficulty in controlling the mobility of some of the boys soon after the group had retired for the night. By starting the new card at bedtime and awarding checkmarks for remaining in bed, we were gradually able to reduce this mobility to a large extent.

During the second year of the project, checkmarks were awarded by the dormitory counselors at fifteen minute time intervals. Three checks were awarded for appropriate behavior during these time intervals. This was found to be more successful than awarding checkmarks for completion of specific tasks since the primary focus was on appropriate behavior rather than completion of assigned tasks.

Teacher-Counselor Teams

To promote maximum staff effectiveness in working with the children in the program, teacher-counselor teams were established.

Counselors worked with small groups of children in carrying out the afternoon recreational program. The criteria for assigning children to a group was age, interest level, and physical ability. In most cases, children were assigned to a group made up of their classmates. By grouping children in this manner, it was possible to coordinate the activities of the teacher and dormitory counselor to insure maximum benefit for the children involved.

The teacher and dormitory counselor met one afternoon each week to discuss activities planned for the children and ways in which they could coordinate these activities. An example of this was the teaching of vocabulary associated with various rooms in a house or dormitory by the classroom teacher, using pictures and flashcards, and the reinforcing activities carried out by the dormitory counselor using the real objects in the dormitory after school. Conversely, when teachers were informed of the activities that would be carried on in the after school program by the dormitory counselors, they incorporated these experiences into the vocabulary and language development program that was being carried on in the classroom. These weekly conferences also provided an opportunity for the teachers and counselors to discuss individual children and determine appropriate measures to take in helping them overcome their educational and behavioral problems.

Each Friday afternoon, copies of the teachers' lesson plans for the coming week were provided for use by the dormitory counselors and copies of the dormitory counselors afternoon activities plans were provided for use by the teacher.

Instructional Program

In evaluating children for inclusion in the experimental program it became obvious that the subjects selected were grossly deficient in the basic language and vocabulary skills. For this reason, a course of study was developed by the teaching staff which focused on the basic vocabulary and language patterns associated with the child himself, parts of his body, articles of clothing, and the satisfying of his basic needs. The next level of the curriculum dealt with the child's family and home. The third level with the school and dormitory environment and the fourth with areas in the community in which the child had frequent contacts. in addition, instruction was provided in mathematics. It was postulated that subjects who were able to overcome their behavioral problems to a sufficient extent to be integrated into a regular class for deaf children would require basic skills in language and mathematics if they were to achieve academic success in the new setting.

Instructional Materials

Because of the limited educational backgrounds of the majority of the subjects, it was necessary to develop specialized instructional materials to meet their needs. A survey of commercially prepared materials showed them to be inappropriate for working with children who are functioning at the level of most of the subjects in the project. The only commercially prepared materials used were the S. R. A. mathematics workbooks, the Sullivan series of programmed reading books, and the Fitzhugh Plus program.

The teaching staff was given instruction in the development of programmed instructional materials during the month of in-service training prior to the arrival of the children the first year. The programmed format was selected for the medium of instructional materials for several reasons: (1) Because of the widely divergent educational backgrounds of the children, a high degree of individualized instruction was necessary. Programmed materials provided an independent activity that reinforced the concepts taught by the teacher, and permitted the children to proceed at their own pace. The materials also served as a ready check of the effectiveness of instruction by the teacher by indicating areas of weakness; (2) Programmed materials provided the child with the repetitions necessary for the development of language concepts through a series of small, logically arranged visual stimuli. Thus, the visual input channel was effectively employed to provide a partial substitution for the auditory channel through which language development takes place in the hearing child; (3) Programmed materials were consistent with the use of behavior modification techniques since they provided immediate knowledge of results and positive reinforcement for correct responses.

During the second year, extensive use was made of "teacher-made" 35mm slides and "Super 8" color movie films in teaching vocabulary and language concepts. The 35mm color slides were used for teacher presentation of vocabulary and language concepts. They also served as a self-instructional and review device for children using the Carousel projector independently in the study carrel. The color movie films were highly motivating since they provided self-identification for the child with the concepts being taught. They also enabled the child to "relive" and "review" experiences that had taken place outside of the classroom setting.

Lesson Plans

Each Friday afternoon the teaching staff submitted their lesson plans for the coming week. These plans included a listing of the concepts to be taught in vocabulary, language, and mathematics, a description of terminal behaviors that would be used to evaluate satisfactory performance, the procedures to be followed, and materials that would be utilized. Three copies of these lesson plans were submitted. One was retained by the project supervisor, one was returned to the classroom teacher, and the third was given to the dormitory counselors who were working with the same group of children in their afternoon activities. Each Thursday afternoon teachers submitted a detailed report on the instructional activities which had taken place during the past week based on these lesson plans. In addition to this, suggestions were provided for possible procedures and devices which might be used by the parents to reinforce the concepts taught. This report usually included a short sentence or paragraph concerning each child's behavior and academic progress for the week. Dittoed copies of these reports were provided for the parents each Friday afternoon when the children went home for the weekend.

Parent Program

The parent program was designed to provide a basic orientation to the problems imposed by the handicap of deafness, to provide instruction in manual communication which would facilitate communication between the parents and their children, and to explore parental attitudes and self-concepts that might be affecting the parent-child relationship and the social and emotional development of the child.

Parents of children who had been deemed to be appropriate subjects for the experimental study were informed that their child's acceptance into the program would be contingent upon their agreement to take the child home each weekend and their active participation in the Parent Program. All of the parents agreed to these conditions, but there was a wide variance in the degree of active participation in the Parent Program. In some cases this was due to circumstances over which the parents had no control, while in other cases, there was a notable lack of interest which was consistent with what seemed to be a pattern of rejection of the child.

Initially, parent meetings were held at 3:00 on alternate Sunday afternoons. Presentations were made by members of the Pilot Project staff, the school psychologist, the audiologist, and by Dr. Donald MacMillan of the University of California, Riverside. Topics discussed were as follows:

1. General overview of the project and the role of the parents--Dr. Richard G. Brill, Project Director and School Superintendent and Robert K. Lennan, Project Supervisor.

2. A comparison of the language development of children with normal hearing and deaf children and discussion of the educational implications--Robert K. Lennan, Project Supervisor.

3. Demonstration of techniques and materials used in teaching vocabulary and language--Members of the Pilot Project Teaching Staff.

4. Psychological implications of deafness--Mr. Don Campbell, School Psychologist.

5. Discipline--Mr. Don Campbell, School Psychologist.
6. Description of the behavior modification techniques being used--Robert K. Lennan, Project Supervisor.
7. Discussion of behavior modification techniques that could be used by parents--Dr. Don MacMillan, University of California, Riverside.
8. Panel discussion by deaf adults concerning their experiences as deaf children growing up in a hearing family--Deaf faculty members from the staff of the California School for the Deaf, Riverside.
9. Explanation of the functions of the hearing mechanism, demonstration of the distortion of auditory input experienced by children with hearing impairment using a hearing aid, explanation of various types of hearing loss and the care and proper use of hearing aids--Mr. Erpel Garrett, School Audiologist.
10. Discussion of dormitory routine and recreation program--Members of the Pilot Project dormitory staff.

Manual Communication Classes

Manual communication classes were provided on Friday afternoon following the close of school for those parents who came to pick up their children at that time. A class was also provided on Sunday afternoon for the parents returning their children. Participation was on a voluntary basis. Parents who participated in these classes consistently reported that they were highly beneficial in helping them establish meaningful communication with their children and in carrying on activities which served to reinforce concepts which the children had been learning in school.

Parent Counseling Program

The initial series of parent meetings were designed to provide basic orientation and education. The second phase of the parent program was designed to provide group counseling through the guidance of a licensed family and marriage counselor through a series of ten weekly sessions. These meetings took place from 3:00 to 5:00 p.m. on Sundays, and were conducted by Mr. Allan Kirkpatrick, a licensed family and marriage counselor.

The need for a therapeutic type group composed of parents of children in the Pilot Project was indicated by the following factors:

1. The assumption that interpersonal behavior of children is a product of parental attitude.

2. An awareness of the dysfunctional effect of severe role failure on family stability. The greater the degree of role failure, the greater the likelihood of family disorganization.

3. That the emotional problems manifested by children in the Pilot Project were capable of generating serious family stress. This is supported by known research.

4. The need for change in parental attitude and management of the child in the home if regressions to earlier behavior patterns were to be avoided. Expressed in another way, if family stress generated regression of tendencies in the subjects, then it was important to reduce this stress.

At the first meeting the objectives of the group discussions were outlined by the leader. It was pointed out that the primary purpose of this phase of the program was to develop a high level of self understanding and sensitivity to others. While these were highly desirable attributes for all parents, they were more essential for parents in families where unusual psychological stress might be generated by any of its members. It was further pointed out that parents, in fact, often unconsciously provoke the very behavior in their children that they consciously found repugnant. With these considerations in mind, it was, therefore, both logical and desirable to focus the attention of the group on its members rather than on their children. Each person was encouraged to concentrate on self-development rather than on the development of someone outside of the group. Members were also encouraged to help one another in developing greater self awareness. The goals of the group were to be achieved through sensitivity training, role playing, psychological testing, and general discussion of the test findings.

The California Psychological Inventory was administered on March 5, 1967. All but four of the twenty-seven parents took this initial test. Eight months later, the California Psychological Inventory was administered a second time. It served as a psychometric device, as an objective measure of the effectiveness of the parent counseling program, and it also helped members of the program to greater self-understanding through the feedback provided by the group leader on the test results.

Because of the innovative character of the group counseling program, its activities were not rigidly determined in advance of the meetings. The majority of meetings were devoted to discussion of specific problems that the various parents were experiencing in such areas as sibling rivalry, acceptance of their child by those outside the immediate family, discipline, dependency, etc. Guidelines for sensitivity training were discussed and, to a limited extent, followed. Some role playing was carried on with roles reflecting fairly typical conflict situations for parents of deaf children with emotional problems.

Problems that were most recurrent and intense among the parents were indicated by direct expression of members of the group, tests, surveys, and observations by the project supervisor and were as follows:

1. Communication with the deaf child on a meaningful level.
2. Lack of understanding and acceptance of the child by relatives, friends, neighbors, etc.
3. The marital conflict concerned with management of and attitudes toward the child.
4. Parental guilt and other related feelings which could not be fully acknowledged. For example, martyrdom.
5. Discipline. The fluctuations between overprotection and rejection. The variations from one family to the next were often matched within specific families.

Chapter III

FINDINGS AND ANALYSIS

As with most educational investigations this one had dual, concurrent objectives. While on the one hand data is gathered to permit hypothesis testing regarding effectiveness of procedures, there is at the same time a need to serve the immediate and changing needs of the children involved. This two-fold intent results in distortions in research design and experimental treatment which agonize the conscientious and scandalize the pure. It seems, nevertheless, necessary to tolerate these departures from rigor when dealing with children in such desperate need of help as those comprising the subjects of this study. Among the items for which we beg tolerance are the lack of random assignment to classrooms, lack of base-line records on some variables, lack of continuous participation by the starting sample throughout the project and a composite "treatment" which cannot be partitioned into the independent effects of method, teachers, and parent involvement with the precision desired. Ultimate conclusions and generalizations must be restrained by these limitations.

Procedures

The overriding goal of this project was to modify behavior of disturbed boys to the point that normal teaching could effectively occur. Behavioral data and its analysis was accordingly given high priority. Behavioral data was collected using both open and closed system techniques. During four sequential blocks of time detailed accounts of pupil in-class activity were written by non-participant observers. These observers were college students trained by the project consultant on research to prepare objective records of pupil behavior. Time sampling for ten minutes per pupil insured systematic coverage within a class. Careful scheduling provided comparable coverage over the four classrooms. During other time blocks in the course of the project behavior of teachers as well as pupils was recorded through the use of the Observation Schedule and Record referred to herein as OScAR (Medley and Mitzel, 1958, 1963). Recording on this comprehensive closed system checklist was done by college students trained for its use in this special application. Some OScAR categories were modified after discussions with the teachers of the deaf and the project coordinator. To avoid being trapped exclusively within the areas covered by the OScAR during the initial block of observations (Fall, 1966), observers wrote a statement after each period of checking noting episodes of significant pupil-teacher or pupil-pupil interaction. The OScAR data and the episode reports of the first three months constitute our best approximation of base-line classroom conduct apart from the intake case history material reported elsewhere.

Another source of behavioral data was a set of narratives written by the four teachers and five dormitory personnel. These were prepared on each boy by each staff member working with him at the end of each of the 68 weeks of the two project years.

Behavior specifically relevant to successful classroom participation was assessed on a check list described by Hewett (1968). These were scored and grouped into seven educational goals.

Assessment of social reaction and behavior was assessed directly by items in the modified OScAR, by ratings of social behavior by teachers, and indirectly by a performance test of projected social perception.

Formal evaluation of achievement reported in the areas of reading and arithmetic.

Characteristics of the parents and home climate were obtained with the Parent Attitude Research Instrument (PARI), California Psychological Inventory (CPI), and questionnaires.

Classroom Behavior

Pre-, post-, and contrast group contrasts. The closest approximation to a pre- and post-test comparison in classroom conduct is provided by contrasting the episode reports of the opening weeks against terminal anecdotes taken on ten boys from the original group still in regular attentance in June, 1968. The analysis proceeded as follows: a corps of judges was recruited from summer 1968 classes in special education at the Riverside and Los Angeles campuses of the University of California. These judges all had teaching experience. They were paid $2.00/hour in the hope of encouraging thoughtful, unhurried reading. A judge was given a packet of randomly ordered anecdotes and directed to rank the K records from k = 1, 2, ...K. Although tied ranks were accepted, readers were asked to minimize ties. They were told to apply their own criteria of what constituted behavior that was favorable versus unfavorable for a teaching-learning environment. For this test judges were directed to rank order a set of randomly ordered narratives comprised of ten of the earliest and representative episodes and the ten final episodes. Because of an interest not only in change of behavior in the experimental sample but also in extent to which behavior approached "normal" behavior, another comparison was made. In the interests of economy of both time and money, the judges treated the two comparisons as a single task. In addition to opening episode reports and the final anecdotes, ten representative anecdotes taken in regular deaf classrooms were mixed into a set of thirty narratives to be ranked.

The array of ranks assigned by eight judges was tested for agreement with the coefficient of concordance and found acceptable at the

Table 1

Pooled Ranks Assigned To The Ten Anecdotes Drawn From Three Comparison Groups

Group E Fall 1966	Group E Spring 1968	Group C Winter 1968
1.88	7.69	16.62
3.06	8.00	16.88
4.00	14.06	18.19
6.19	14.75	19.75
6.56	17.56	19.81
7.25	20.75	20.81
8.94	21.44	23.00
9.81	22.50	23.81
10.94	22.56	25.81
19.31	25.44	27.62
Mdn 6.90	19.16	20.35

One-tail comparisons (Mann-Whitney)

Fall 1966 < Spring 1968 $U = 11$ $p < .01$

Spring 1968 < Regular $U = 33$ NS

alpha = .01 level (W = .74) Pooled ranks were computed for the ten items in each of the three comparison groups. These data are given in Table 1 and shown in Figure 1. Differences between groups of interest were tested by the Mann-Whitney statistic, U. One-tail probabilities were applied since direction of difference was being predicted. The first comparison is between the base-line data or ten early episode reports and the posttest or final ten anecdotes.

Alternative hypotheses are:

H_0: the distributions of ranks of the two sub-groups do not differ, versus

H_1: significantly more ranks in the posttest are of higher order than those in the Fall, 1966, data.

On comparing the extent of intermingling of ranks, the obtained statistic is U = 11 which is significant at the alpha = .01 level. H_1 is tenable and support is given to the conclusion that behavior was viewed by independent judges as significantly improved at the end of the project.

The second comparison is between the posttest or final ten anecdotes and the ten representing regular classes of deaf children. The alternative hypotheses are:

H_0: the distributions of ranks of the two sub-groups do not differ, versus

H_1: significantly more ranks in the regular class sample are of higher order than those in the Spring, 1968, project sample.

Calculations yield a U = 33. This value is too high to permit rejection of the null hypothesis. The judges did not rank the behavior observed in the regular classes significantly higher than that in the final week of the project class.

At the end of each rating run the judge was required to dichotomize the run into two subsets. She labeled as acceptable episode that in her opinion could be assimilated in a normal teaching program. Unassimilable behavior episodes were labeled unacceptable. An anecdote was assigned by us as unacceptable when at least six judges gave the rating. From these data it is possible to show how the three comparison groups are perceived on this dichotomy. Figure 1 is bisected to show this information. All but one of the Fall, 1966 episodes are unacceptable. Only two Spring, 1968 episodes are so rated and all contrast group episodes are acceptable.

This stage of the evaluative analysis provides overall support for the effectiveness of the project with two findings. First, samples of behavior taken at the end were judged to be significantly more favor-

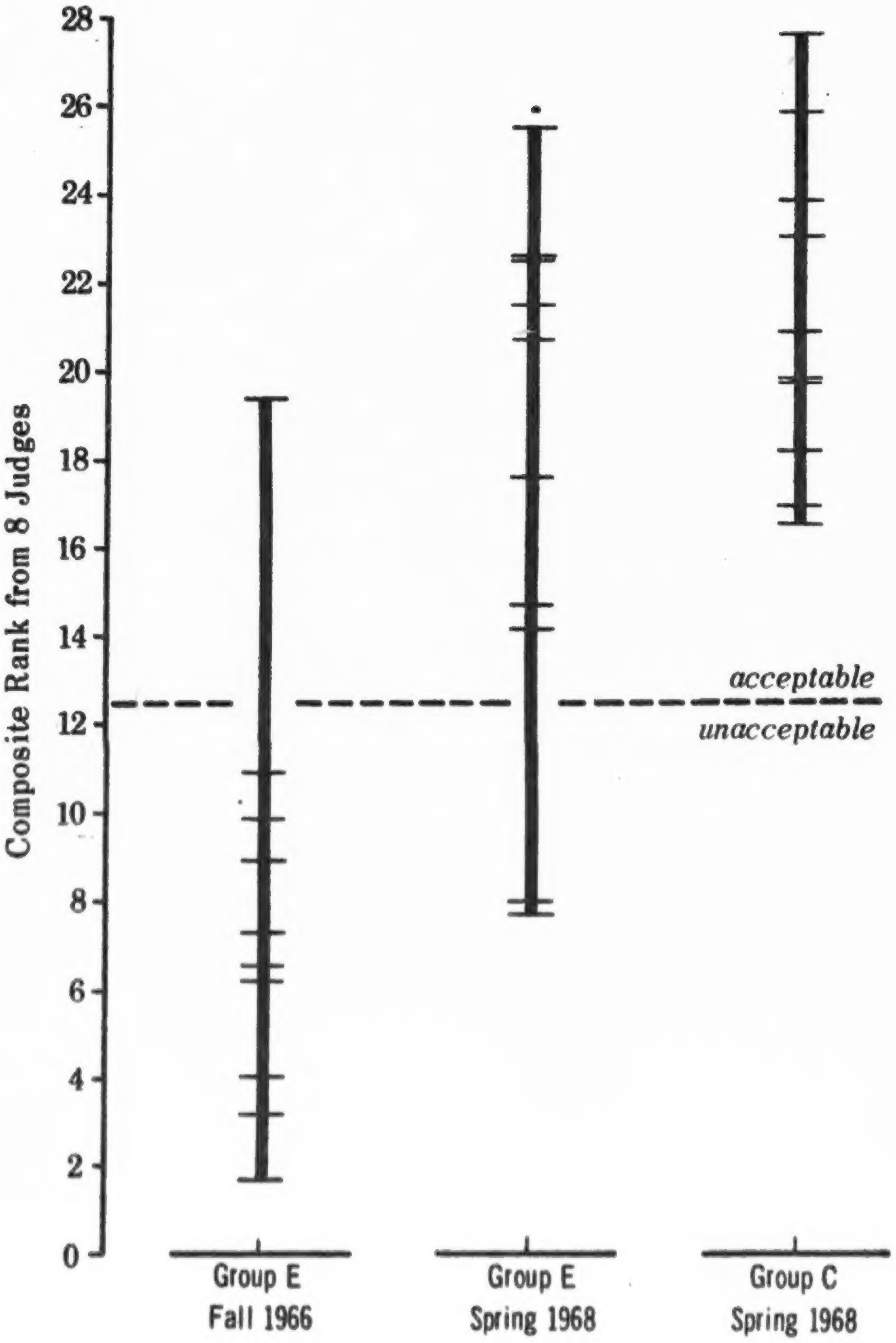


Figure 1. Comparison of ranks assigned to ten episodes at the beginning of the project, ten episodes at the end, and ten occurring in regular deaf classes.

able for normal teaching-learning activities than those taken at the beginning. Second, the samples of behavior taken at the end were judged to overlap to a significant degree those samples taken in regular classes. This second finding needs to be tempered by calling attention to the fact that Figure 1 also shows that behaviors sampled at the project ending swing through a wider range of quality than is true of the regular classes. That is, low ranked behavior is not entirely absent but became significantly less frequent at the end of the experiment.

Longitudinal analysis, non-participant data. The time-sampled anecdotes on individual subjects are a particularly fruitful source of evidence for evaluation. The basic information was analyzed in two ways: (1) ranking by independent judges and (2) "scoring" on a set of behavior categories to obtain the incidence of favorable and unfavorable types.

As described under Replacement of Subjects above, some subjects were dropped and others added during the two years of the project. Therefore, continuous records are available on only eleven of the original sixteen pupils. These pupils accumulated on the average of twenty-five anecdotes apiece. For each pupil a packet of all anecdotes describing his behavior over the two years was assembled. Each packet for the eleven pupils was ranked by eight judges in the manner described above. The array of ranks assigned each pupil's set of anecdotes was tested for acceptable agreement by a coefficient of concordance. All coefficients were significant at the alpha = .01 level. Supported by this high degree of consensus, the eight rankings given each boy's set were pooled yielding a pooled rank associated with each anecdote. These pooled ranks permitted graphic and statistical analyses.

The results of individual pupils which demonstrate the oscillation characteristic of individual growth curves will be described and included in the following chapter. The results for the group of eleven continuing pupils are given in Table 2. The ranks assigned by subject are based on the average of the several anecdotes taken during each sampling block. This ranking of the pooled ranks obtained from judges provides data in a form to test for differences among blocks. A Friedman analysis of variance by ranks (Siegel, 1956) supports the hypothesis of significant differences across the four block at the five per cent confidence level.

Because of interest in an experiment-wise trend in the differences among the block mean ranks a post hoc analysis of trend using the method of orthogonal polynomials was made (Marascuilo & McSweeney, 1967). The results of this analysis are shown in Table 3. These data allow the conclusion, at $p < .05$, that for the group as a whole there was a steady improvement perceived in behavior (see significant linear component). Although some regression is noted over the summer recess of 1967, the trend line is not significantly sinusoidal to imply a meaningful drop (see non-significant cubic component).

Table 2

Ranks of Eleven Subjects Across Four Blocks of Behavior Sampling

Subject Number	Sampling Blocks			
	Winter 1966-7	Spring 1967	Fall 1967	Spring 1968
1	2	3	1	4
2	4	3	2	1
4	1	3	2	4
5	1	4	2	3
7	1	2	4	3
9	1	2	3	4
10	1	3	2	4
12	3	4	2	1
14	2	1	3	4
16	1	4	2	3
19	1	2	3	4
Sum Rank	18	31	26	35
Mean Rank	1.636	2.818	2.363	3.181

Note.--Friedman analysis of variance by ranks: $\chi_r^2 = 8.7813^*$

$^*p < .05$

Table 3

Post Hoc Trend Analysis Following Friedman Analysis of Variance

Component	$\hat{\psi}$	Var $\hat{\psi}$	$\frac{\hat{\psi}^2}{\text{Var}\,\hat{\psi}}$ [a]	Post hoc Confidence Interval
Linear	4.1816	3.0303	5.7703*	$0.0212 < \psi_L < 8.3420^*$
Quadratic	-0.3636	0.6061	0.2000	$-2.2243 < \psi_q < 1.4961$
Cubic	2.9092	3.0303	2.7929	$-1.2512 < \psi_c < 7.0796$

[a] Total = 8.7632. Obtained $\chi_r^2 = 8.7813$.

*Significant at $\alpha' = 0.0167$ or $\alpha = 0.05$.

When judges rank anecdotes using internalized criteria, they are responding to a composite image generated in them by the paragraph. This type evaluation is quite relevant because in a school setting a teacher would be judging the acceptability of pupil conduct on the basis of a global impression. Still, this procedure is open to the objection that the standards of conduct vary among teachers. In addition to computing a coefficient of concordance on the array of ranks assigned by eight judges, a comparison of judges' acceptable versus unacceptable decisions were made to provide evidence on the reliability of pooled ratings. This is shown in Table 4. The data on which the tallies were done are the 30-item set representing the E group at the beginning and end and the contrast group. From Table 4 it is clear that the group contained lenient teachers (#1 and #2) and strict teachers (#7 and #8), but with a balance in decisions such that for the combined group of raters acceptable versus unacceptable judgments are distributed 15:15.

Table 4

Distribution of Unacceptable-Acceptable Ratings
for the Eight Judges Rankings Comparison Groups

Judgment Classification	Judge								All
	1	2	3	4	5	6	7	8	Judges
Unacceptable	8	9	12	12	16	19	20	27	15.4
Acceptable	22	21	18	18	14	11	10	3	14.6

Longitudinal analysis, participant data. Another group of judges, experienced teachers enrolled in a graduate level class in educational psychology at the University of Southern California were paid to rank descriptive narrative behavior reports written each week (K = 68) by the teachers and dormitory staff. These judges were provided with background information on the general scope of the project and on the Hewett hierarchy of goals in particular (Appendix A). Ten narrative behavior reports, each covering a period of one week, were selected at random using a table of random numbers (Kendall and Smith, 1939) for each of the eleven continuing boys. The judges were instructed to rank these reports in terms of progress toward the Educational Goals. With this sampling procedure between subjects contribution is proportionally equal across the two years and varies at random in any specific week. Therefore, overall behavioral change, as seen by participants, can be shown by plotting the ranking averages of the boys sampled across time. Figure 2 shows this relationship where the 68 weeks have been collapsed to 16 blocks to obtain samples of about five observations per block.

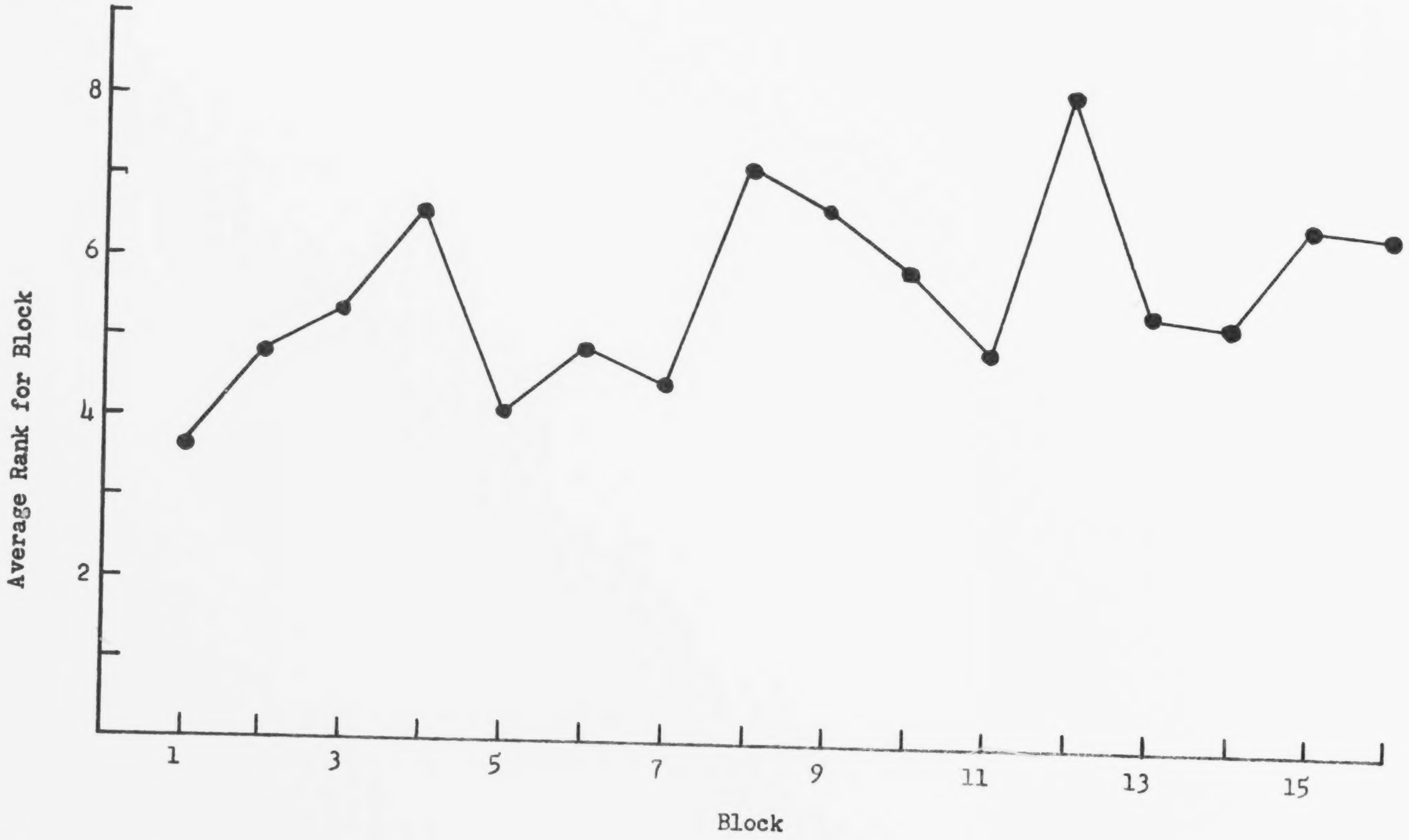


Figure 2. Distribution of ranks assigned to staff narrative reports.

Analysis of behavior by categories. A behavioral checklist was compiled by the research consultant. The first form of the list was based on professional experience and knowledge plus certain behaviors noted in the sample during the opening weeks of the project. This form contained items which if manifested at a high incidence rate would impede both individual and class progress. A second list of behaviors was compiled to allow the range of conduct and relationships of a group of non-disturbed deaf children to be represented. This list was empirically based on the dissection of 67 anecdotes taken in four different regular classes for the deaf at the same age span as the project sample. From these two lists, a third form was devised. The final checklist resulted from both revisions and combinations of categories previously suggested. It emerged only after extended discussions with the research team of college students and the consultant based on several trial runs with selected anecdotes. The product was a 38 item list which is divisible into four major areas: pupil-teacher reactions, peer reactions, task oriented reactions, and non-specific emotional reactions.

To evaluate the anecdotal data against this list, a tabulation of their occurrence throughout the entire set of anecdotes was made. The research assistants each made independent tabulation and the final figures are based on consensus of the team. These tabulations were examined for evidence of a shift from unfavorable toward favorable behavior. One examination is to test whether the program had a differential effect on the incidence of behaviors classified as favorable versus those labeled unfavorable. Table 5 shows these data.

Table 5

Number of Items Changing Incidence

From Winter 1967 to Spring 1968

Category of Classification	Direction of Change	
	Decline	Stay or rise
Favorable	6	5
Unfavorable	19	6

These data fail to support the effectiveness of the program in reducing unfavorable conduct while increasing favorable. The procedure, however, ignores the magnitude of differences found within the categories across the four blocks of time sampled and is, therefore, relatively insensitive and liable to Type II error.

An efficient test is the Wilcoxen ranked differences technique. Using the data in Table 6, three one-tailed tests were made at alpha = .0167 to insure that the overall significance was at least at the alpha = .05 level.

The first comparison of Winter, 1966/67, versus Spring, 1968, tests the alternative hypotheses,

H_0: Incidence of unfavorable is not different,

versus

H_1: Spring, 1968, "scores" are lower.

The twenty non-zero pairs yield the Wilcoxen statistic, $T = 6.5$. The probability of a T this low if H_0 were true is far below the alpha level set. The hypothesis of significant decline in unfavorable behavior is tenable.

It is apparent from Table 6 that much, if not most, of the decline occurred during the first year, i.e., between blocks, Winter 1966, and Spring, 1967. A second comparison was, therefore, made between these blocks. Two similar hypotheses were tested.

H_0: The incidence of unfavorable behavior does not differ between the blocks,

versus,

H_1: Spring, 1967 incidence is below Winter, 1966.

Twenty-three non-zero pairs provide the test data. The obtained $T = 5.5$ is well below that permitted at the alpha level set. Thus, again H_0 is rejected and the hypothesis of difference is tenable. Significant non-chance decline in unfavorable conduct did apparently occur.

Referring again to Table 6, it appears that except for further reductions in tension reducing motor activity, no significant change occurred in the incidence of the behaviors catalogued. A third statistical comparison of Spring, 1967, versus Spring, 1968, confirms the lack of significant difference in incidence. $T = 58$ which does not permit rejection of the null hypothesis.

Table 6

Data For Wilcoxen Test of Decrease In Incidence of Unfavorable Behavior

Items	Winter 1966	Spring 1967	Fall 1967	Spring 1968
Inattentive	35	14	26	25
Delays starting work	12	4	7	8
Solicits attention	26	14	11	18
Provokes teacher	31	6	11	5
Punishes teacher	3	1	1	5
Resists teacher	7	0	3	5
Scuffling	3	0	1	2
Combat	3	0	3	3
Deprecates pupils	3	0	1	1
Interfere with pupils	9	0	6	5
Ignores pupils	3	0	1	2
Inappropriate affectional response	0	0	2	0
Diverts w/out return	3	4	2	2
Discouraged easily	3	2	2	5
Detached from situation	9	2	5	2

Table 6 cont'd

Items	Winter 1966	Spring 1967	Fall 1967	Spring 1968
ATR[1] -- Oral	38	22	17	22
ATR[1] -- motor	57	42	27	26
Hairtrigger reactions	5	0	3	2
Overlasting reactions	5	2	5	1
Suspiciousness	2	0	0	0
Possessive of objects	0	2	1	0
Destructive of property	2	0	0	0
Self-hurting	2	0	2	2
Spill-over; out of control	5	0	2	1

---

[1] ATR = automatic tension releasing behavior

Achievement of Educational Goals

The behavior of subjects was assessed by the project teachers using a rating form based on the Developmental Sequence of Educational Goals (Hewett, 1968). Items describing specific behaviors are categorized into seven developmental levels: (1) attention, (2) response, (3) order, (4) exploratory, (5) social, (6) mastery, and (7) achievement. These assessments were carried out three times (fall, winter, and spring) during each of the two years. Items describing specific behaviors within each level of the developmental sequence were rated on a four point Likert scale. Item scores within each category were averaged in order to yield a single score for each of the seven developmental levels. From these data it is then possible to present the mean levels across the group for the seven goals at several points in time for growth comparison. Figure 3 presents the mean performance levels of eleven continuing boys at three points during the study. Fall, 1966 is given as base-line, Spring, 1967 provides a comparison at the end of the first school year, and Spring, 1968 at the conclusion of the program. Similar data on individual boys is presented in a later section composed of case material.

In comparing the first and second bars in each of the seven developmental categories it becomes obvious that substantial change occurred during the first year. This is particularly true in the case of attention, response, order, exploratory, and social activities. Substantial change also occurred during the first year on the mastery level which is concerned with self-care and intellectual skill development. The greatest changes during the second year occurred in the social and achievement categories. The development of appropriate social relationships with adults and peers and a shift from extrinsic to intrinsic motivation were apparently the more difficult behavior changes to achieve as seen by the lag in their development. These relationships lend support to Hewett's concept of a hierarchical dependency of mastery and achievement on the preceding five readiness goals.

Interpersonal Cathexis

Projected dyadic affiliation. In order to obtain data on the way these subjects organized socially meaningful stimuli, which we presume to relate to patterns of behavior, a human figure paired-placement technique was devised. The technique is based on materials and methods described in the literature for assessing social schemata (Kuethe, 1964; Weinstein, 1965). As used in this study subjects were presented pairs of silhouettes of human figures cut from black felt and asked to place them anywhere on a large yellow felt board. Four combinations were presented: adult male and female, male and boy, female and boy, boy and boy. Stylized figures similar to those illustrated by Hobbs (1966) were used. All trials were photographed, mounted as 35mm slides and later projected on graph paper to permit measurement between figures with a common, although arbitrary, scale of

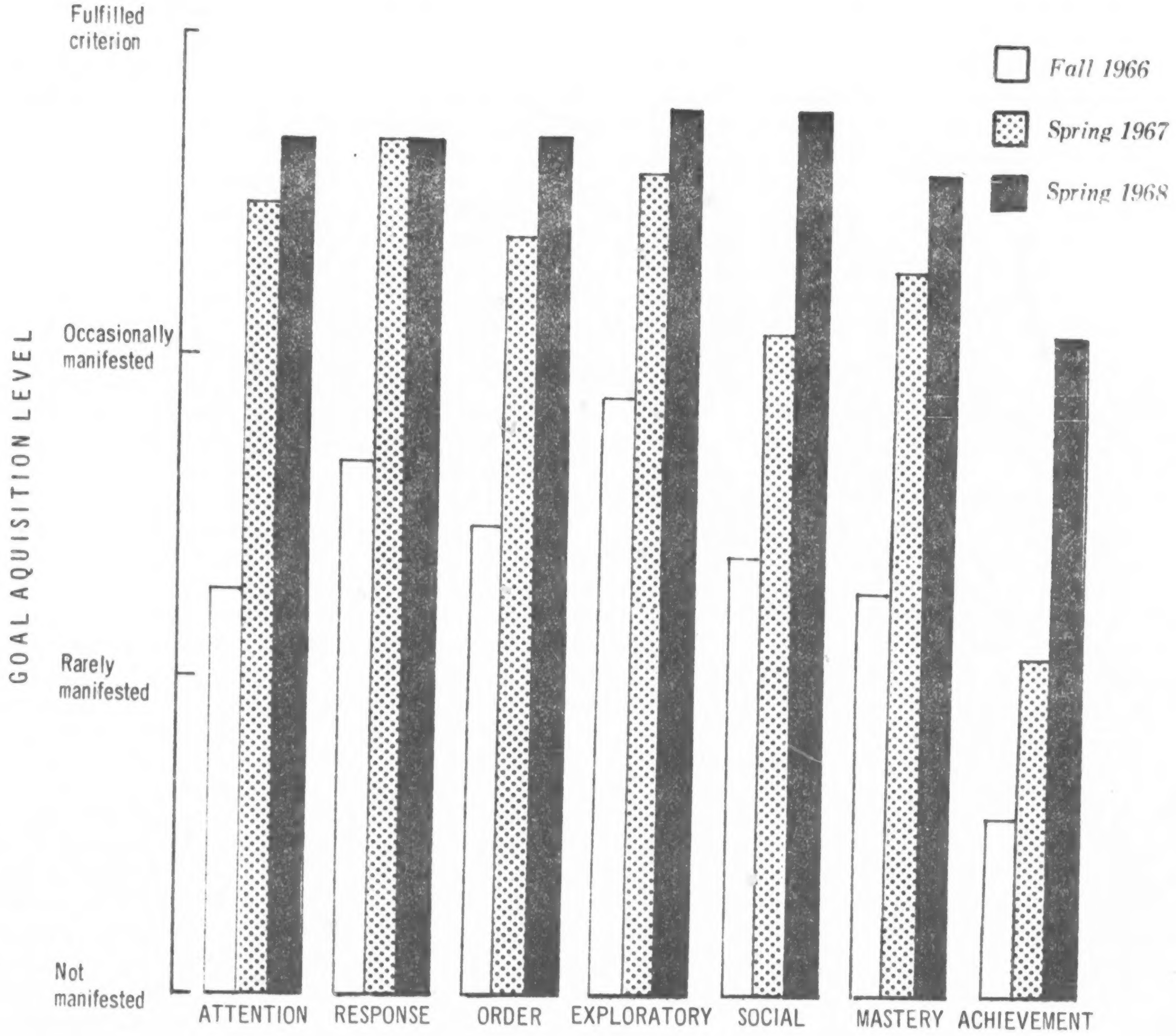


Figure 3. Comparisons of rated gains in educational goals for group of eleven continuing subjects.

units. The procedure provides scores on an equal interval scale allowing the use of parametric contrasts. The results described below come from a sample of nine boys in continuous enrollment over the two years of the project with scorable performances.

Figure 4 presents graphs of the mean distances between members of the four pairs at the three times this assessment was used. For contrast, also plotted are means based on sixteen boys chosen by the school psychologist from the school population as representative of non-disturbed deaf boys in the same age range. It is evident that only one set showed pronounced change, viz., the child-child pair.

The Winter I to Summer II change in the mean inter-figure distance of the child-child pair is the only mean change to reach significance, $t = 3.00$, $p < .05$. Among the four means obtained at the end of the project, i.e., Summer II, only the difference between the inter-figure distance for the male-female pair and that for the child-child pair reaches significance, $t = 2.48$, $p < .05$.

In comparing the contrast group with the project sample the only series of interest is that taken in the Summer II. Differences between these groups on the adult male-child task and the child-child task are significant at the .05 level. Whether these statistical findings are experimentally meaningful is uncertain for the present. It seems that inasmuch as Winter I scores were within normal bounds as defined by the contrast group and that the project boys showed a significant shift only on the child-child pair, that, therefore, the only real change in social schemata of the project boys is to see their colleagues as more important to them than is typical. Formation of peer cathexses was noted in the reports of the college observers to the research consultant.

Rapport with Adults and Peers. Staff members were asked to rate each subject in terms of behavior shifts they had seen in his relationships with adults and peers. Ratings were recorded on 5 x 8 cards using a five point Likert Scale (Appendix B) ranging from "improved" to "worse". A composite of the ratings obtained and an average rating for each subject in these two categories is shown in Table 7.

The eleven continuing subjects were generally rated as having made moderate or marked improvement in their relationships with adults. Only nine ratings of "no change" and one of "somewhat worse" were made in this category. Changes in interchild rapport as observed by adults were somewhat less marked and shown by the greater preponderance of "moderate improvement" and "no change" ratings. The average ratings for this sample were 4.4 (considerable improvement) on rapport with adults and 4.1 (moderate improvement) on rapport with children.

Table 7 shows also the ratings of staff members for the five replacement subjects who entered the project in the second year. As might be expected, there is a greater preponderance of "no change" and "moderate change" ratings for the subjects in this group. Average ratings for this group are 4.0 on behavior with adults and 3.9 on behavior with children.

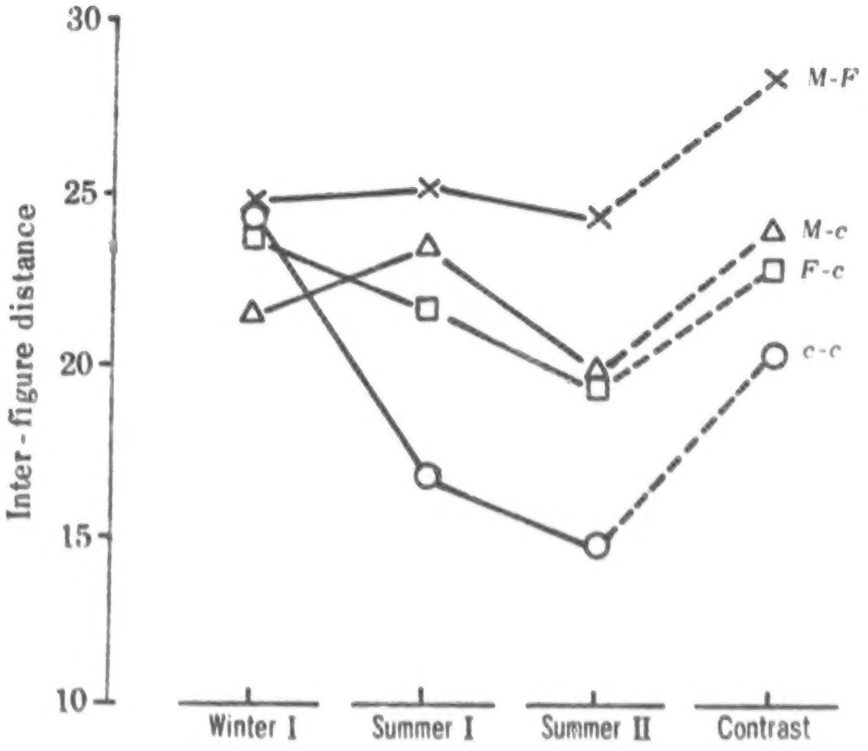


Figure 4. Distance placed between four family oriented dyads by nine project boys at three testings and a contrast group of 16 deaf boys.
M = adult male; F = adult female; c = boy.

Table 7

Evaluation of Relationships of 11 Project Boys With Adults and Peers by Staff Rating Scale

	Rated Change					
	Worse		No Change		Improved	
Subject[a]	1	2	3	4	5	Average
			Behavior With Adults			
1				3	6	4.7
2			1	4	4	4.3
4			2	2	5	4.3
5		1	1	6	1	3.8
7				3	6	4.7
9				6	3	4.3
10				1	8	4.9
12				3	6	4.7
14			2	3	4	4.2
16			3	3	3	4.0
19				4	5	4.6
			Behavior With Children			
1				4	5	4.6
2			2	5	2	4.0
4			2	3	4	4.2
5			3	4	2	3.9
7			1	3	5	4.4
9			3	6		3.7
10			1	3	5	4.4
12				6	3	4.3
14			1	5	3	4.2
16			2	5	2	4.0
19			1	7	1	3.9

[a] Subjects in group 1 - 19 are subjects in class for two years.

Subjects in group 8 - 21 are subjects in class for the second year only.

Table 7 cont'd

Evaluation of Relationships of 11 Project
Boys With Adults and Peers by Staff Rating Scale

	Rated Change					
	Worse		No Change		Improved	
Subject	1	2	3	4	5	Average
Behavior With Adults						
8			2	5	2	4.0
13			2	4	3	4.1
17			3	3	2	3.9
20		1	2	3	3	3.9
21			1	5	3	4.2
Behavior With Children						
8			3	5	1	3.8
13			3	5	1	3.8
17			1	7		3.9
20		1	2	4	2	3.8
21			1	5	3	4.2

[a] Subjects in group 1 - 19 are subjects in class for two years.
Subjects in group 8 - 21 are subjects in class for the second year only.

Reading Development

Emphasis by priority of location has been accorded the results obtained from analyses of behavior. This emphasis seems well justified by the fact that maladaptive behavior was the prime symptom preventing these children access to classrooms. The project did, however, employ a teaching environment and some achievement data are in order.

With few exceptions, these boys were very low in formal scholastic skills. Several were well below even the usually retarded level of reading and language one associates with profound deafness. It should be recalled that of the original group, three had never attended school (Ss 2, 10, 12); of these, one (S 10) had been committed to a mental hospital for three years. Another (S 4) had been excluded since 1963 and another (S 14) had a record of only occasional attendance. School histories of this sort plus inadequate communication in many of the homes seem implicated in the poor performance in the Fall 1966. In fact, baseline scores as usually supplied in evaluating a teaching program are essentially nonexistent in all skills.

An effort was made to formally evaluate reading throughout the two years. Two tests were used, the Gates Primary Reading Test Battery and the Stanford Reading Test. The Stanford proved to be too difficult with most boys scoring at a chance level even at the end of the project. Reported below are total scores from the Gates Primary Battery.

Scores for all boys tested are given in Table 8. Perusal of the table reveals that only seven boys completed the test in the opening Fall and one of these, #1 with a score of 1.3, is equivalent to a raw score of zero or one. The extent of reading deficiency is apparent in the comparison of a subject's first test score, either November 1966 or June 1967, with the grade equivalent derived from his age at the time of that first test. The chronological age grade placement (CAGP) at the time of the first testing is given in the second column of Table 8. One boy (S 9) placed three months ahead of the CAGP, the rest range from one to four school years behind.

Two correlated variables are related to the reading deficiency. First, deprivation in language experience and training has been described above. Second, older boys, for whom duration of deprivation was longer, were the more retarded in reading (Ss 10, 16, 19). In addition, since experience suggests that reading retardation would be related to disruptive conduct, this relationship was checked. A correlation of 0.34 was obtained between amount of retardation (Reading score - CAGP) and the proportion of anecdotes in the Fall 1966 judged unacceptable by at least six of the eight judges. This figure implies a low positive concommitant relationship as expected but does not reach statistical significance with this overall sample.

Comparisons among the four data columns of Table 8 show a continuing gain in reading level for most members of the group. Using the matched pairs model, the following contrast of interest were obtained:

γ

Table 8

Reading Achievement Scores for Subjects by Class

Subject	CAGP Test 1	Gates Primary - Total 11/66	6/67	11/67	4/68
Class S					
5	4.5	2.5	2.9	2.8	3.0
9	2.3	2.6	3.0	3.2	3.2
16	7.4	--a	3.4	3.5	--b
Class W					
10	5.3	--[c]	1.9	1.3	2.4
12	2.5	--[c]	1.6	1.4	1.9
14	3.3	--[d]	1.4	1.9	--
Class C/M					
1	3.9	1.3	2.0	2.4	2.4
2	4.3	--[d]	1.3	1.8	2.2
4	3.1	--[c]	2.0	2.0	2.2
7	2.3	--[d]	2.0	2.4	2.4
19	6.3	2.8[g]	2.9	3.2	3.2
Pupils in first year only					
3	6.4	2.6	2.7	(reg. class)	
6	2.6	1.4	1.9	"	"
15	2.1	--[d]	2.3	"	"
18	7.4	2.8	2.7	(deceased)	
Pupils in second year only					
8	6.7	---	--[a]	2.5	2.7
13	3.2	---	--[a]	--[d]	1.3
17	5.8	---	--[a]	2.5	2.7
20	4.8	---	--[a]	--[d]	1.6
21	2.1	---	--[a]	--[d]	1.6

[a] Not yet admitted
[b] Missed testing because of part-time participation in regular class.
[c] Random selection of answer choices
[d] Did not respond on test.
[e] Systematically biased marking, i.e., every nth space
[f] Word meaning subtest only.
[g] Word recognition subtest only

Contrast	M_D	t	df	sig.
Nov. '66 - June '67	0.30	3.00	6	$p < .05$
Nov. '66 - Apr. '68	0.65	4.22	3	$p < .05$
June '67 - Apr. '68	0.37	4.75	8	$p < .01$
Nov. '67 - Apr. '68	0.25	2.70	10	$p < .05$

The mean gain in both years (the first and fourth rows) were similar and significant. Total gain across two school years was available on only four boys but was significant even with only three degrees of freedom (row two). Perhaps of greater confidence, because of the inclusion of some boys who did not know how to respond in the Fall, is the third contrast, the end of the first year (June, 1967) to the end of the second year (April, 1968). The mean gain for nine boys with scores at these points is highly significant. Summer change, i.e. June, 1967, to November, 1967, was not significant for eleven available pairs. In summary, the group made steady and significant gains in reading level during each year. The magnitude of the gains is about 40% of the test norm group gain.

This change in reading falls below the expected gain for hearing children. It is instructive to consider reading level change for deaf children not classified as adjustment problems. Two sets of Gates Primary scores separated by one year were obtained on a random selection of 24 "normal" deaf children enrolled in the regular lower and elementary school classes at CSDR. The separate scores are listed in Appendix C. Using the same comparison model as applied above, we find the following: $M_D = 0.14$, $t = 1.93$, $p < .05$. Therefore, when the reading level change in regular deaf classes is used for comparison, the gain shown by the project class is not only statistically significant but educationally gratifying.

Arithmetic Achievement

With the exception of four subjects who had formerly been enrolled in classes at the California School for the Deaf at Riverside, the eleven continuing subjects had no concept of numbers at the time they entered the project in the Fall of 1966. Thus, it was not possible to obtain baseline scores of arithmetic achievement for these seven subjects through formal testing.

The Gray-Votaw-Rogers Achievement Test was administered in June, 1967 and scores in arithmetic reasoning and computation were obtained for eight of the eleven subjects. Subjects Nos. 10, 12, and 14 were unable to earn a minimum score on the test due to their continued deficiency in arithmetic achievement. In April of the second year, the test was administered again. Subject No. 14 was the only child unable to earn a minimum score at that time.

Scores for all boys tested are given in Table 8A. Perusal of the table reveals that seven of the eight subjects who were able to earn scores on the test in 1967 and 1968 showed an increase in achievement in arithmetic reasoning and computation. Only the scores of arithmetic computation were treated statistically since standardized tests of arithmetic reasoning essentially measure the reading ability of deaf children. The mean gain in arithmetic computation for the seven subjects is significant, $M = .5$ (1/2 year) $t = 3.26$ $p < .05$. This change in the level of arithmetic achievement falls below the expected gain for hearing children but is comparable with the gains of deaf children of similar ages in regular classes.

Table 8A

Arithmetic Achievement Scores for Subjects by Class

Subject	Gray-Votaw-Rogers Achievement Test								
	10/66			6/67			4/68		
	Reas.	Comp.	Avg.	Reas.	Comp.	Avg.	Reas.	Comp.	Avg.
Class S									
5	(3)			1.0	2.7	1.85	1.9	3.2	2.55
9	(3)			1.0	1.6	1.3	1.9	3.0	2.45
16	2.7	3.3	3.0	1.2	3.8	2.5	2.3*	4.6	3.45
Class W									
10	(1)	--		--	--	--	1.2	1.7	1.45
12	(1)	--		--	--	--	1.2	1.4	1.3
14	(1)	--		--	--	--	0	0	
Class C/M									
1	(1)			1.5	2.3	1.9	--	2.8[2]	--
2	(1)			1.2	1.3	1.25	1.3	1.5	1.4
4	(1)			1.2	2.3	1.75	1.2	2.1	1.65
7	(1)			1.3	1.2	1.25	1.2	1.7	1.45
19	(3)			1.4	2.5	1.95	1.2	3.0	2.1

1 Did not have concepts of numbers; not tested formally.
2 February, 1968
* 10/68 test score
3 No scores available

Classroom Ecology

Before investigating implications of these findings on the group, it will be instructive to look at the extent to which individual differences among teachers were manifested. The data accumulated with the Observation Schedule and Record (OScAR) over an eight week block in the Fall of 1966 and during the Spring, 1968, a few weeks before the end of the project, are presented in Table 9.

Total amounts of time observed in each classroom vary as a result of differences between the college student observers' schedules and the activity schedules of the project classes. The column entries are defined by spanners and except for Item 67, are all percentage figures. The base number is explained in the spanner and specified in the column header.

Evidence of the prevailing instructional strategy and climate in the Fall, 1966, can be seen in several categories. At the top of the list, it may be noted that typically over half of the time was spent in question and answer interchange between teacher and pupils. Teacher "W" was seen considerably less often to answer pupils' questions (Item 2) a fact that may be related to her being profoundly deaf. Teacher "S" responded to pupil questions at a high frequency, while Teacher "M" tended to control instruction by her own questioning (Item 1). This high proportion of time devoted to dialogue is consistent with the classroom management strategy being employed--behavior modification. By comparison, generally less time was used for talking (oral with concurrent fingerspelling) to the class, illustrating or demonstrating, although individual difference among teachers is clear.

In the classes, 1:1 teacher-pupil instructional contacts were by far the most frequently observed (Item 39). Teacher "S" rarely used any other arrangement. Others occasionally worked with 2-3 pupils. Soon after the beginning of the project, the role of Teacher "C" was changed to that of supporting teacher rather than principal instructor. Teacher "M" assumed major instructional responsibility for those seven boys while Teacher "C" supported, aided, and reinforced the practice of the boys who weren't in a teaching session. This arrangement occasionally resulted in 6-8 pupils being in Teacher "C"s room (Item 36).

These teachers operated unmistakably as teachers. They did not attempt to assume a therapist role. In addition to problem structuring being the modal communicative behavior both years (Item 61), the time in class was heavily invested in basic skills content areas (Items 50-52). The moderate use of "arts and crafts" (Item 56) reflects the planned activities designed to develop stimulus ordering and exploration.

Corresponding to these teacher activities, those of the pupils show the emphasis on independent student-like conduct in the teacher

Table 9

Incidence of Behaviors Signaling Teacher Style and Classroom Climate [1]

Items	Fall 1966				Spring 1968			
	Class C	Class M	Class S	Class W	Class C	Class M	Class S	Class W
	Percent of 5 minute periods (P) in which items were observed to occur							
Teacher instructional activities	(P=28)	(P=37)	(P=51)	(P=38)	(P=24)	(P=21)	(P=24)	(P=18)
Teacher...								
1. questions; pupil answers.	60.7	78.4	56.9	50.0	87.5	52.4	83.3	83.3
2. answers pupil question.	57.1	62.2	74.5	26.3	70.8	61.9	75.0	83.3
3. ignores pupil question.	3.6	10.8	11.8	0	8.3	9.5	16.7	5.6
4. lectures.	0	2.7	0	2.6	0	0	0	0
5. reads or tells story.	0	0	0	0	0	0	4.2	0
6. talks to class.	10.7	24.3	1.96	0	8.3	9.5	16.7	16.7
7. at board or overhead projector	21.4	45.9	9.8	13.2	41.7	14.3	16.7	16.7
8. illustrates at map or chart.	7.1	10.8	0	18.4	12.5	4.8	12.5	5.6
9. demonstrates.	21.4	29.7	33.3	13.2	20.8	9.5	12.5	5.6
10. shows film or slides.	0	0	0	0	0	0	16.7	0
11. passes paper or books.	14.3	0	5.9	2.6	4.2	4.8	0	11.1
Teacher non-instructional activities								
Teacher...								
12. works at desk.	28.6	18.9	19.6	13.2	20.8	9.5	29.2	27.8
13. cleans or decorates room.	0	5.4	3.9	0	4.2	0	4.2	0
14. writes on or decorates board.	10.7	10.8	0	5.3	4.2	4.8	0	0
15. talks to visitor.	0	2.7	11.8	10.5	8.3	0	25.0	27.8
16. leaves or enters room.	7.1	13.5	17.6	15.8	29.2	33.3	12.5	16.7
Pupil-as-individual activities								
Pupil...								
17. reads or studies at seat.	17.8	8.1	37.2	21.0	33.3	23.8	33.3	33.3
18. paints or manipulates at seat.	82.1	70.3	92.2	47.4	75.0	71.4	54.2	61.1
19. points, cuts, draws at seat.	35.7	29.7	19.6	28.9	25.0	47.6	0	11.1
20. at board or overhead projector	21.4	32.4	9.8	23.7	33.3	9.5	12.5	0
21. cleans room or board.	0	8.1	5.9	7.9	4.2	0	0	5.6

---

[1] Based on an adaptation of the "Observation Schedule and Record" (Medley and Mitzel, 1958, 1963)

Table 9--continued

Incidence of Behaviors Signaling Teacher Style and Classroom Climate

Items	Fall 1966 Class C	Fall 1966 Class M	Fall 1966 Class S	Fall 1966 Class W	Spring 1968 Class C	Spring 1968 Class M	Spring 1968 Class S	Spring 1968 Class W
	Percent of 5 minute periods (P) in which items were observed to occur							
Pupil-as-individual activities	(P=28)	(P=37)	(P=51)	(P=38)	(P=24)	(P=21)	(P=24)	(P=18)
Pupil...								
22. rests or has snacks.	0	0	0	2.6	4.2	9.5	4.2	0
23. leaves or enters room	25.0	10.8	21.6	21.0	2.5	38.1	10.8	16.7
24. aimless behavior (hands on head)	28.6	24.3	56.9	57.9	8.3	19.0	29.2	38.9
Pupil in class activities								
25. talks to group.	0	0	0	0	16.7	19.0	16.7	5.6
26. recites	0	0	0	0	0	9.5	8.3	0
27. demonstrates or illustrates	7.1	0	0	0	4.2	4.8	8.3	0
28. plays game.	0	2.7	0	2.6	0	0	0	0
29. interprets.	0	0	3.9	0	0	4.8	16.7	0
30. leads class.	0	0	0	0	0	0	8.3	0
31. ignores teacher question.	7.1	2.7	3.9	39.5	0	0	0	0
32. scuffles or fights.	17.8	2.7	5.9	7.9	16.7	0	12.5	0
33. "whispers".	14.3	29.7	17.6	10.5	0	0	4.2	0
34. laughs.	10.7	8.1	19.6	18.4	0	0	37.5	11.1
35. talks to visitor.	0	2.7	0	2.6	0	0	12.5	5.6
Instructional grouping								
Teacher with...								
36. 6 - 8 pupils.	3.57	0	1.96	0	0	9.52	0	0
37. 4 - 5 pupils.	7.14	5.40	0	0	12.5	14.29	5.0	16.67
38. 2 - 3 pupils.	17.86	32.43	0	34.21	25.0	28.57	4.17	50.0
39. 1 pupil	71.43	54.05	96.08	63.16	66.67	76.19	54.17	55.55
Instructional material used by pupil								
40. Chalkboard, overhead projector.	14.3	24.3	3.9	13.2	25.0	19.0	12.5	0
41. Map, chart, picture.	10.7	10.8	0	26.3	4.2	4.8	8.3	11.1
42. Slide, film, ...	0	0	0	0	0	0	12.5	38.9

Table 9--continued

Incidence of Behaviors Signaling Teacher Style and Classroom Climate

Items	Fall 1966				Spring 1968			
	Class C	Class M	Class S	Class W	Class C	Class M	Class S	Class W
	Percent of 5 minute periods (P) in which items were observed to occur							
Instructional material used by pupil	(P=28)	(P=37)	(P=51)	(P=38)	(P=24)	(P=21)	(P=24)	(P=18)
43. Object material	0	2.7	0	5.3	16.7	14.3	0	0
44. Special teaching aid	7.1	27.0	19.6	10.5	33.3	14.3	25.0	0
45. No materials	0	2.7	0	0	4.2	9.5	16.7	5.6
46. Text or workbook	7.1	8.1	62.7	7.9	37.5	52.4	0	27.8
47. Supplemental reading materials	35.8	27.0	54.9	23.7	0	0	4.2	0
48. Writing materials	17.8	37.8	58.8	28.9	50.0	47.6	66.7	61.1
49. Handicraft or art	42.8	37.8	11.8	31.6	25.0	28.6	0	11.1
Content areas	(P=53)	(P=74)	(P=100)	(P=70)	(P=48)	(P=42)	(P=48)	(P=36)
50. Reading	1.9	47.3	54.0	27.1	0	11.9	0	0
51. Mathematics	52.8	6.8	42.0	17.1	58.3	47.6	25.0	0
52. Language arts	35.7	51.4	48.0	35.7	47.9	47.6	64.6	88.9
53. Social studies	0	0	0	0	0	0	6.3	2.8
54. Science	0	0	0	0	0	0	0	0
55. Recreation	0	0	0	0	4.2	0	4.2	0
56. Arts or crafts	50.9	29.7	19.0	30.0	25.0	26.2	0	2.8
57. Social process	0	4.0	0	0	0	14.3	4.2	5.6
58. Testing	3.8	55.4	0	0	12.5	0	12.5	0
	Percent of total number of events occuring during block of P Periods							
Teacher expressiveness: Teacher's statement, expression or gestures...	(P=25)	(P=37)	(P=49)	(P=32)	(P=24)	(P=21)	(P=24)	(P=18)
59. Implies affection or approval	14.4	11.5	21.1	26.6	3.6	0.6	7.3	5.0
60. is pupil-supportive	19.1	26.9	3.7	4.4	24.1	27.4	10.0	35.8
61. is problem-structuring	24.6	20.9	24.5	22.6	35.0	10.8	26.8	23.3
62. is directive	12.1	17.5	22.2	19.0	23.2	27.4	30.7	20.8
63. is reproving	5.1	8.4	7.1	2.2	5.0	10.7	10.0	3.3
64. implies hostility or reproval	2.8	3.8	5.7	14.6	0	0	0	0.8
65. asserts his authority	0.9	1.2	2.3	4.0	1.8	2.4	3.4	0
66. is miscellaneous	20.9	9.6	13.4	6.6	7.3	10.7	11.7	10.8
	Average interval between pupil movement in minutes							
67. Pupil mobility level	3	5	5	3.5	3	5	3.75	2.67

dominated environment established by the behavior modification approach. Pupils tended to work at their seats (Item 17, 18) and not participate in group class activities (Items 25-30). However, during the Fall, 1966, considerable task avoidance and class disruptive behaviors were noted (Items 24, 32-42). Clandestine signing and gesturing which interrupted a neighbor's tasks was scored as equivalent to "whispering" (Item 33).

The data tabulated for the Spring of 1968, show that the rooms remain instructionally oriented. With behavior under better control, more time was now being put into the curriculum. Teachers' questioning is up (Item 1), pupil questioning is up (Item 2), illustrating and demonstrating a little more uniform across teachers (Items 7-10), 1:1 teacher-pupil teaching is still predominant, but small group participation has increased (Items 36-39), and the curriculum is more diverse though still skills oriented (Items 50-58). Expressiveness items show the shift toward more instructional activity with more pupil supportive, problem structuring, and directive "statements" (Items 60, 61 and 62), with a corresponding proportional reduction in affectional messages (Item 59) as pupils had less need of these to maintain task orientation.

Pupils still work mostly at their seats (Items 17-20). Irrelevant pupil actions (Item 24) are down and "whispering" (Item 33) is much diminished. Fighting and scuffling (Item 32) is isolated to two rooms and involves principally new subjects added to the group in the second year.

Assessment of Parental Attitudes

The attitudes of mothers of subjects toward child-rearing and family life were assessed using the Parental Attitude Research Instrument (PARI) developed by Schaefer and Bell (1958). Mothers were given a box containing 115 IBM punch cards on which attitudinal statements were printed and asked to sort them into four categories: strongly disagree, mildly disagree, mildly agree and strongly agree. A list of the statements sorted is given in Appendix D. For scorings, the choice categories were treated as a Likert scale with values from 1 to 4. Interpretively, the 115 items of the PARI are grouped into 23 subscales of five items each. For each subscale, the average of the five item scores was used as a scale score. From these a profile was generated for a group of twelve mothers responding in the Fall, 1966, nine of whom also responded in the Spring, 1968. This profile is given in Figure 4A. Individual profiles of mothers are included in the case study section below.

On the profile (Figure4A) the 23 scales have been arranged into three conceptual groups: three rapport scales, nine child development opinions scales, and eleven scales related to the wife-mother roles. This instrument is used for ipsative comparisons of the mothers with themselves and with the progress of their sons. Normative comparisons in these personality areas is provided by the California Psychological Inventory (CPI) reported below.

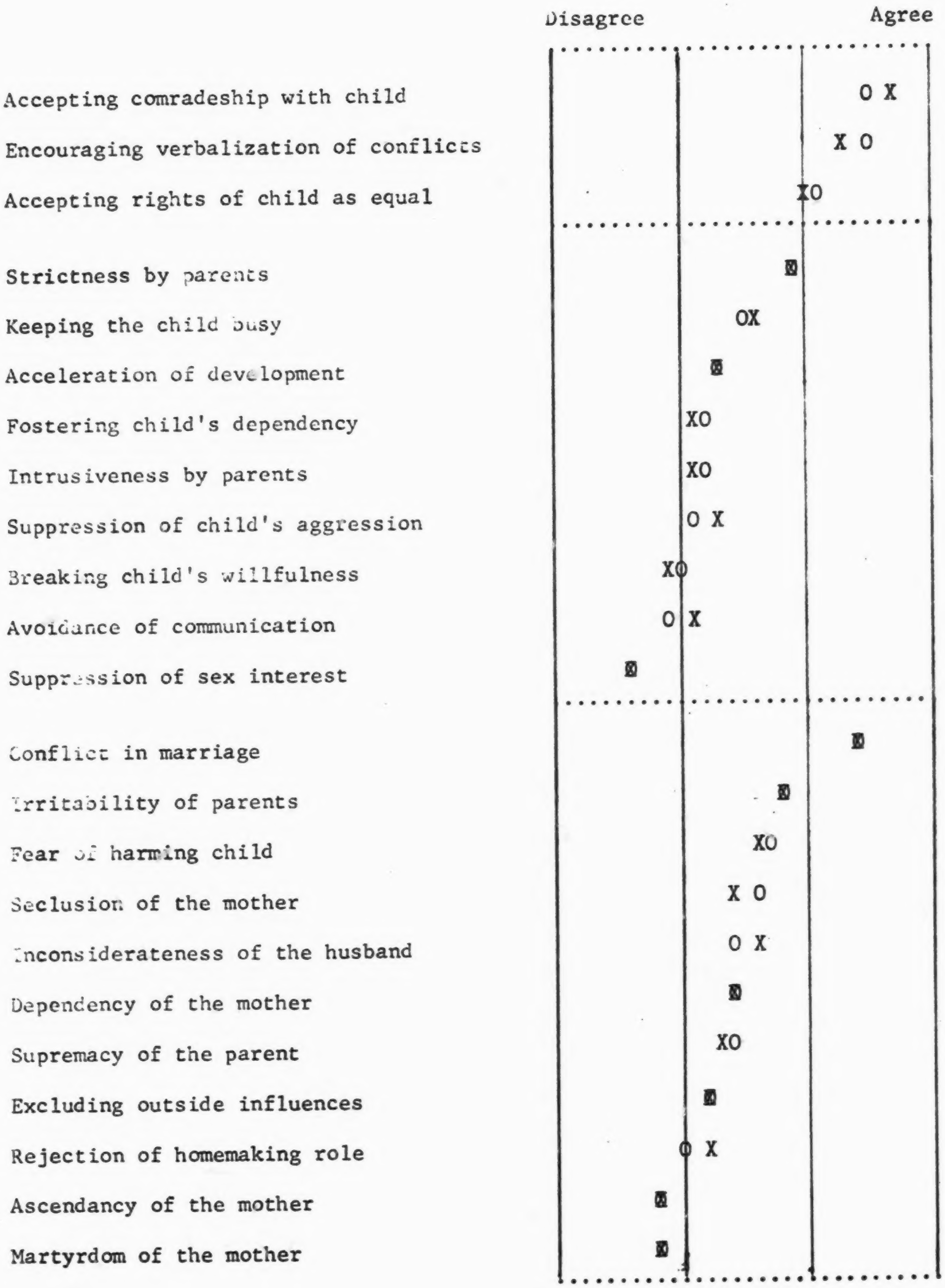


Figure 4A Profile of Parent Attitude Scales. Points are means of twelve mothers tested in the Fall, 1966 (O's) and nine mothers tested in the Spring, 1968 (X's).

Analyzing Figure 4A, it is apparent that this group of mothers was sufficiently aware of standard attitudes regarding child rearing to substantially agree with the rapport scales items. They did so both on their original sort (O's) and final or exit sort (X's). As regards development needs of children, there is more variability among attitudes than is the case for the rapport scales. The average scores for these nine scales lie in the relatively non-committal mid-scale region. Agreement with statements specifying the need to be strict with children in order to develop their controls is moderate for these mothers. Only with statements describing direct interference in acquiring sex information because of undesirable consequences did the group show substantial disagreement. With remaining statements about the need to intrude on or affect child development, mothers found items of both agreement and disagreement so that average values are close to mild disagreement.

The mothers are somewhat more willing to admit to difficulty in the wife-homemaker roles. Notably acceptance of statements that marriage is a condition of conflicts is quite high. Variability is narrow on this scale, with only two mothers rating as low as mid-scale. Also, there was acceptance of over half of the items describing children as amazing and the need to suppress social activity to be considered a good mother. The conflict implicit in this result may also underlie the amount of agreement on items concerning apprehensiveness over the risk of physically hurting a child. Schaefer and Bell consider this scale sensitive to conflict over suppressed hostility toward the child. There is preponderent group disagreement with statements that describe a mother as trapped and unable to do what she wants, that depict the need for the mother to control the household, and that describe the mother's strenuous work as never rewarded or acknowledged. Variability is wider than on the conflict in marriage scale. Two mothers strongly agreed with the items of the rejection of the homemaking role. On the remaining wife-mother scales, there are marked individual differences. As will be noted in a later section, these tend to be related to family contextual differences and choice of coping with marital and parent-child conflicts. It should be noted, therefore, that while mean scores lying at the top or bottom of the scales convey the trend of the group's attitude, mid-scale scores in most instances do not reflect non-commitment by most mothers. In fact, six of the Fall, 1966 mothers rate six or more of these scales in the extreme ranges.

California Psychological Inventory Test-Retest Comparison

The California Psychological Inventory was administered to parents who took part in the group counseling sessions. The test instrument is a 480-item questionnaire with eighteen standard scales designed to measure personality characteristics significant in the daily living and social interaction of normal persons.

Table 10

California Psychological Inventory Test-Retest Comparison

Subject	Parent	Mean Standard Scores Feb. 1967	 Nov. 1967	Change
1	Mother	47		
	Father	39		
2	Mother	45	55	+10
	Father	--[a]	30	
3	Mother	50	--[b]	
4	Mother	55	50	- 5
	Father	40	50	+10
5	Mother	20	30	+10
7	Mother	40	45	+ 5
	Father	50	53	+ 3
9	Mother		38	
10	Mother	40	45	+ 5
	Father	50	52	+ 2
12	Mother	48		
	Father	55		
14	Mother	53		
15	Mother	20	--[b]	
	Father	20	--[b]	
16	Mother	40	48	+ 8
	Father	40	48	+ 8
18	Mother	48	--[c]	
	Father	43	--[c]	
19	Mother	50		
8	Mother	--[d]	20	
	Father	--[d]	40	
20	Father	--[d]	20	
21	Mother	--[d]	42	
	Father		50	
				Av. +5.6

[a] imprisoned at time of first test

[b] subject accepted into regular class at end of first year

[c] subject deceased during first year

[d] replacement subjects

All but four of the parents of the sixteen subjects included in the first year of the study took the test between February 20 and March 5, 1967. The test was administered again in November, 1967. Table 10 shows a mean score for the total test for each of the parents on the initial test and for ten of the parents on the retest.

Scores between 45 and 55 on the California Psychological Inventory are considered within the normal range. The lower the mean score for the eighteen scales, the greater the stress. Conversely, higher scores reflect better personality integration (Kirkpatrick). Nine of the parents initially tested had an average score of less than 45. Of this group, six were retested and showed an average increase of 7.7 points on their mean scores. Since the results of the first test were interpreted for parents in individual conferences by the group leader for the purpose of developing greater self-understanding, it is possible that increased sophistication may account to some extent for the changes in scores.

Of particular interest are the scores earned by the parents of Subject #15 which indicate great stress. Both scored extremely low on the scales which measure the sense of well being and intellectual efficiency. Their marriage ended in divorce in the Spring of 1967. A similar pattern can be seen in the scores earned by the parents of Subject #8. This marriage has broken up as a result of the mother's drinking problems.

Individual profiles for each of the parents tested are included in Appendix E.

CHAPTER IV

INDIVIDUAL CASE STUDIES

The case studies following are designed to provide general background information and an analysis of behavior changes for each of the subjects included in the study.

Materials included are as follows:

1. Family history
2. Educational background
3. Psychological evaluation
4. Neurological examination report
5. Hearing levels re: 1951 A.S.A.
6. Reading and achievement test scores
7. Graphic presentation of judges' rankings of non-participant observer's anecdotes as described in Chapter III
8. Graphs depicting project teacher's evaluations of behavior change according to the Developmental Sequence of Educational Goals as described in Chapter III
9. Staff ratings of changes in rapport with adults and peers as described in Chapter III
10. Description of entering and terminal behaviors drawn from weekly narrative behavior reports by the project staff
11. Current status

SAMPLE CASE HISTORY

Subject #1

Race: W

Birthdate: 5-29-57 Place of birth: Garden Grove, CA

Marital status of parents: Divorced--mother remarried

Stepfather's occupation: Construction

Mother's occupation: Waitress

Siblings: Two sisters, D.B. 1954, 1957; Two brothers, D.B. 1959, 1961

Onset of deafness: 1 year Etiology: Medication to dissolve goiter.

Other deafness in family: Twin sister (deaf, mentally retarded, and emotionally disturbed)

Educational and/or institutional background

Name	Dates attended
Day Class for the Deaf	3/63 to 9/66

I. Q. Test scores (Wechsler equivalent)

Date of Test	Score
4/64	89
9/66	95
9/67	93
5/68	93

Psychological Evaluation

Subject #1 was referred for psychological evaluation by Mr. Robert Lennan, Pilot Project Supervisor, as part of routine evaluation procedures for the Pilot Project pupils.

Subject #1 is a 11 year old boy whose deafness was reportedly caused by medication given to correct a thyroid condition and allegedly occurred when he was one year of age. However, Subject's twin sister is "deaf and neurotic" according to the mother, which would suggest the deafness may be of congenital etiology. Prior to Subject's enrollment in the Pilot Project for Severely Emotionally Children at CSDR, he attended day classes at the Madison School in Santa Ana where he had been since September of 1963.

Subject was first evaluated at this school in April 1964, at which time the Leiter International Performance Scale was administered. The Leiter yielded an I.Q. of 82 which would correspond to a score of approximately 89 on more generally used tests such as the Wechsler.

Subject's behavior during the 1964 evaluation period was described as follows:

> "During the present evaluation, Subject was extremely hyperactive and distractible. Though he responded with compliance to firmness, he continually tested the limits of the examining situation. Apparently he would be a difficult acting out type behavior problem in a classroom setting where there would not be the one-to-one relationship that there is in a psychological evaluation. Secondary to Subject's hyperactivity and distractibility, and part of his generally oppositional behavior pattern were his atrocious work habits."

This same general behavior was prevalent during the 1966 evaluation, just prior to his admission to the Pilot Project Program. At that time the Leiter was again administered yielding an I.Q. of 89. This score corresponds to a Wechsler score of approximately 95 and reflects at least Average Intellectual functioning. Human Figure Drawings and Bender Gestalt responses reflected an expansive personality structure which extended beyond normal limits. There were indications that he had an insatiable need for attention and that he had excessive difficulty relating to his environment.

Again on September 26, 1967, the Leiter Performance Scale was administered yielding an I.Q. of 87. This score falls at the 30th Percentile and corresponds to a Wechsler score of about 93. On the Raven's Matrices, also administered at that time, he earned a score falling at the 35th Percentile.

During the present evaluation period, Subject earned an I.Q. of 86 on the Leiter. This score corresponds to an I.Q. of about 93 on a test such as the Wechsler and correlates well with his previous test scores.

It should be noted, however, that during this evaluation period, Subject's overall behavior had changed significantly. He was pleasant and cooperative in his manner; he was able to make meaningful corrections; he worked with a purpose; and he tried to do his best. Classroom and dormitory reports indicate that these behavioral improvements have been noted by Subject's teachers and counselors as well.

It is the feeling of this examiner that Subject #1 is at best of Low Average intelligence and will be unable to realize more educational achievement than would generally be expected of a Low Average or Dull Normal child. His significant overall improvement in regard to behavior is of a degree which would warrant his being considered for enrollment in the regular academic program at this school for the 1968-69 academic school year.

Neurological Examination

Date of examination: Fall 1966

PAST HISTORY: This boy was born after a normal pregnancy except for some mild nausea and vomiting in the first month or so. The delivery occurred at full term after about seven hours labor. The patient is one of fraternal twins, his sister was born 15 minutes prior to the patient, she is also deaf, mentally retarded and apparently a cretin. The patient was a breech birth but apparently breathed spontaneously, was not particularly cyanotic and no other abnormalities were noted at the time of the delivery. His early development was apparently essentially normal but both he and his twin were said to have had goiters and apparently were both given medication for this. The patient held up his head at seven months, sat alone at ten months, and walked at one and a half years. His teething was somewhat delayed. His development has continued to be essentially normal. His only operation was a tonsillectomy in April of 1963. He has been seen frequently at UCLA Medical Center since 1958 where many studies were done and some exploratory surgery of the auditory system was done. Apparently this boy was first thought to be a cretin also and to be mentally retarded, however, apparently his difficulties were due primarily to his severe hearing loss and subsequent development has suggested he may be within normal limits except for the hearing loss.

EXAMINATION - General - The patient is a well-developed, well-nourished 9-year-old white boy in no acute distress. His general physical condition is good and no gross abnormalities are noted. It is particularly noted that no enlargement of the thyroid gland can be palpated at this time. This boy is alert, cooperative, and can hear and speak moderately well with the held of his hearing aid.

NEUROLOGICAL EXAMINATION: Examination of the cranial nerves including vision, visual fields, optic fundi, pupillary responses, extraocular movements, etc. is essentially normal except for the hearing which is moderately decreased bilaterally. Bone conduction seems greater than air conduction bilaterally but there is no significant difference between the two ears.

Sample Case History cont'd
Subject #1

Examination of the motor system reveals no abnormality of station or gait. The boy is left handed and writes legibly. No gross weakness or paralysis is noted. Cerebellar functions are intact, the deep reflexes are active and equal and no pathological ones are elicited.

Examination of the sensory system reveals no abnormalities. There is no evidence of disease of the spinal cord or peripheral nerves.

IMPRESSION:
1. Bilateral deafness, probably mixed type of moderate degree
2. No other evidence of organic disease of the nervous system

Hearing Loss

	125	250	500	1000	2000	4000	8000
R.E.	45	40	65	75	100	-	
L.E.	65	65	80	-	100	-	

Reading and Achievement Test Scores

Gates Reading Tests

Date of Test	Word Recognition Grade Level	Sentence Reading Grade Level	Paragraph Reading Grade Level	Average
11/66	1.3	--	--	--
6/67	1.7	2.27	1.9	1.95
11/67	2.3	2.55	2.2	2.35
4/68	2.15	2.67	2.27	2.36

Stanford Achievement Tests

Date of Test	Word Recognition	Reading Paragraph Meaning	Vocabulary
11/66	1.1	1.2	
6/67	1.1	1.5	
6/68	1.6	1.6	1.0

Sample Case History cont'd
Subject #1

Reading and Achievement Test Scores

Gray-Votaw-Rogers General Achievement Tests

Date of Test	Reading Voc.	Reading Comp.	Arithmetic Reas.	Arithmetic Comp.	Educational Grade
6/67	1.7	1.2	1.5	2.3	1.7
2/68				2.8	
4/68	1.7	1.9	1.5	2.2	1.8

Graphic Presentation of Judges' Rankings

Figure 5 presents the distribution of ranks assigned to the twenty-five anecdotes written on Subject #1 during the study. On this graph, as on all those following for the rest of the subjects, the numbers along the abscissa are ordinal members of the anecdotes. Number one is the first written and 25 is the last. The point for each anecdote is plotted opposite its pooled rank score calculated from eight judges. These figures are along the ordinate. The dashed line to point 22 indicates a substitute was teaching that day.

Three aspects of this curve may be noted positive overall slope, cycling, and oscillation. Generally speaking, behavior was better for the last several observations than the first. There was a fall off in the Fall of the second year followed by a sharp rise from observation 17 to the highest rating given at observation 23. The curve oscillation indicates that learning of revised modes of conduct is similar to learning curves of other psychological functions but with susceptability for greater regression to earlier forms. The declination at the final weeks, observation 24 and 25, suggests a regression related to the anticipated permanent loss of participation in this highly predictable environment with the return home and new schools next year. This phenomenon is noted in 12 of the 16 graphs in this chapter.

Graph Depicting Project Teacher's Evaluations of Behavior Change

The teacher's ratings of this subject's behavior based on the Developmental Sequence of Educational Goals as shown in Figure 6 indicate that the greatest changes in the first year occurred on the readiness levels of attention, response, and order. Behavior was stabilized on the readiness levels in the second year and there was a significant upward shift on the achievement level.

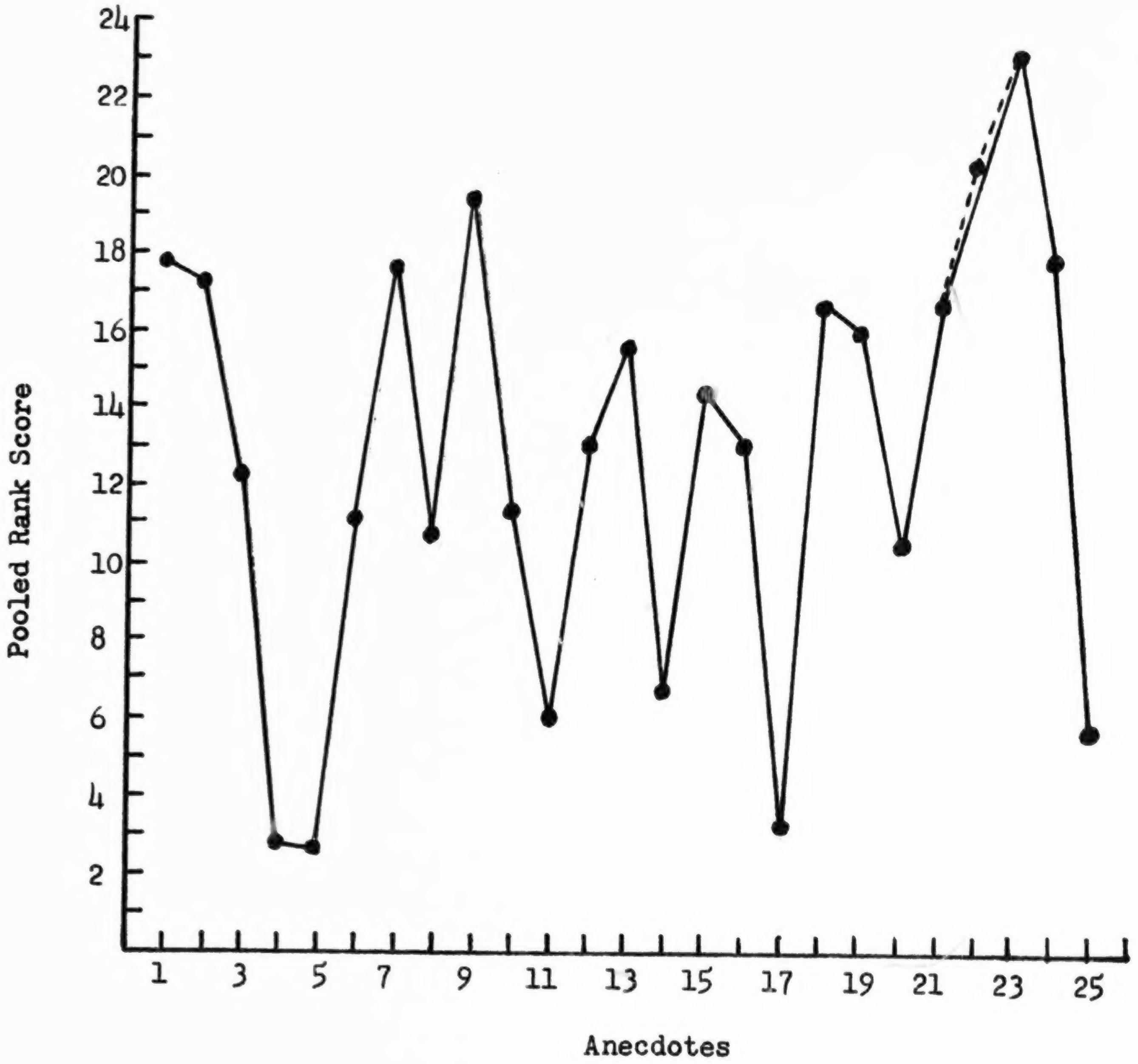


Figure 5. Distribution of ranks assigned to anecdotes. Subject No. 1.

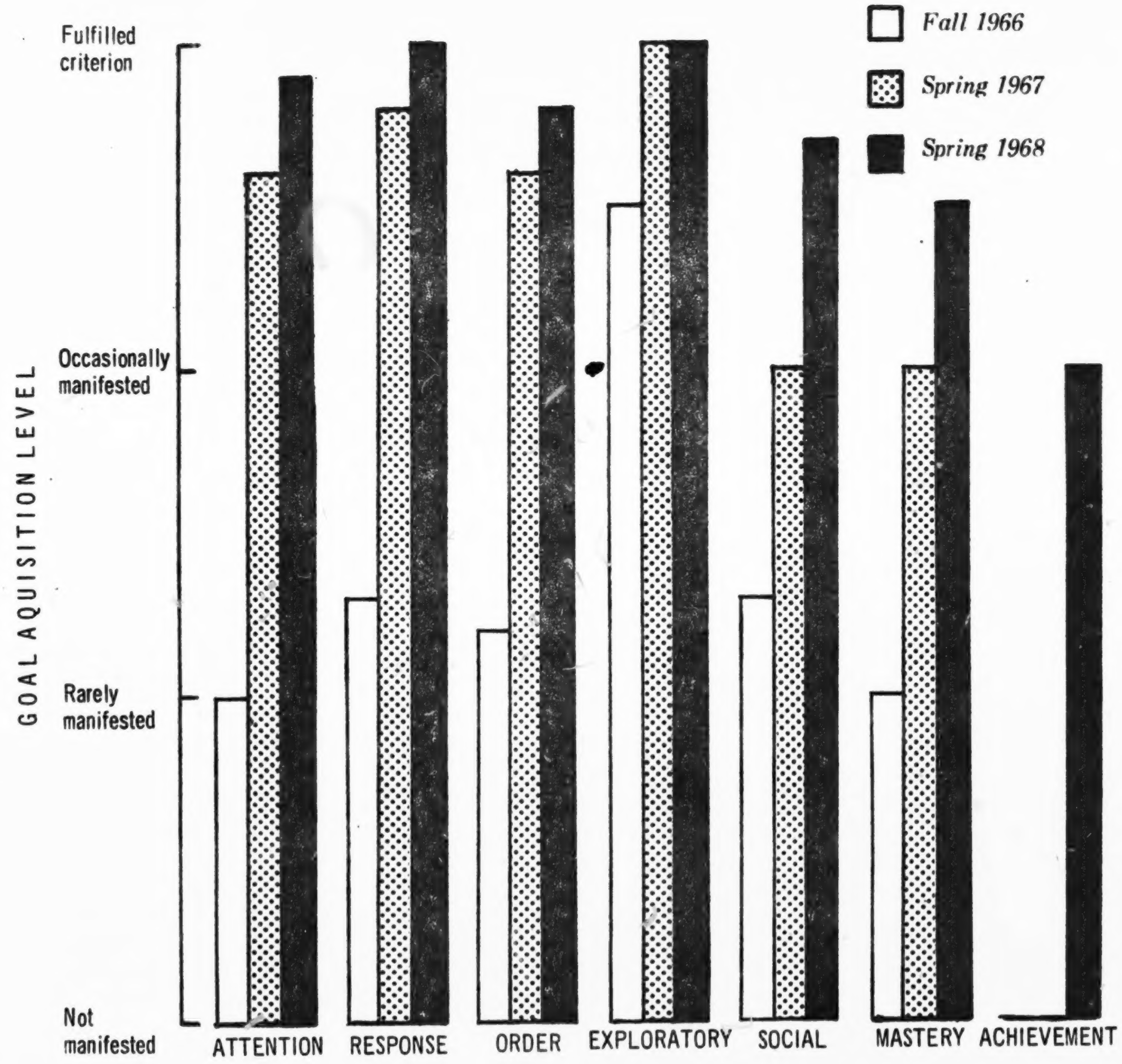


Figure 6. Comparisons of related gains in educational goals for Subject No. 1.

Staff Ratings of Changes in Rapport With Adults and Peers

Staff members rated this subject as having made marked improvement in his behavior with adults (Mean rating 4.7) and peers (Mean rating 4.6).

Entering Behavior

Subject was unable to tolerate normal social activities with peers. He was able to tolerate only those social contacts which he had initiated. Attempts by others to initiate contact resulted in kicking and crying by subject. Hostility toward other children was demonstrated by excessive teasing. He could not tolerate losing games.

Subject exhibited a great deal of sexual acting out behavior in the form of erotic body movements and suggestive facial expressions. Subject's mother reported that these behaviors had been learned by subject's sister at the state hospital in which she is a patient and copied by him as an attention getting device. Inappropriate demonstrations of affection were used as an attention getting device. These consisted of repeated kissing of various parts of staff members bodies and hanging onto them with his head resting against them while emitting a cooing sound. Subject had frequent tantrums in the course of which he threw things about the room, kicked, screamed, and refused to move. At the end of these tantrums he genuinely sought affection from the adult with whom he had been in conflict. This cyclic behavior pattern was seen as an abnormal approach to establishing genuine affectionate contact with adults. Subject was extremely fearful of failure. During an early attempt to administer a standardized reading test, he screamed and cried while repeating over and over, "I can't, I can't." Further evidence of his fear of failure was shown by his continued resistance to work involving new concepts. When confronted with these new tasks, he would cry and say, "I'm stupid" or "I can't". Initially he would refuse to attempt new work but would finally undertake the new task with reluctance after being assured by the teacher that he was capable of doing it. He demonstrated sincere surprise and pleasure at his ability to successfully complete these tasks. Fear of failure was also manifested in dormitory activities. Subject had a basic distrust of staff members and continually accused them of lying when they told him something, or cheating when they played games with him. Subject created a scene when returned to the dormitory on Sunday afternoon. After the first few weeks, this behavior terminated almost immediately after the parent had left. The checkcard system was effective early in the first year in modifying and controlling subject's behavior.

Terminal Behavior

Subject had developed normal relationships with other children in the project and entered into their play activities. He was able to tolerate losing in games.

Subject continued to have difficulty in establishing appropriate relationships with male staff members. He had become conscientious in carrying out assigned tasks and in prompting children new to the project to behave in an appropriate manner. He became quite interested in developing and expanding his vocabulary and language.

Current Status

Subject #1 is a residential student in a class for educationally retarded children in the Elementary School at the California School for the Deaf at Riverside. Reports from his teacher and the counselors in his dormitory indicate that he is making slow but steady progress in his academic achievement and has adjusted to his new environment.

SAMPLE CASE HISTORY

Subject #2

Race: Indian-Mexican

Birthdate: 8-26-57 Place of Birth: Palm Springs, Calif.

Marital status of parents: Married

Father's occupation: Unemployed

Mother's occupation: Housewife

Siblings: three brothers, b.d. 1937, 1941, 1945; four sisters, b.d. 1939, 1943, 1951, 1961

Onset of deafness: Unknown Etiology: Unknown (possible Waardenburg's Recessive Syndrome)

Other deafness in family: None

Educational and/or institutional background

Name	Dates Attended
State Hospital for the Mentally Retarded	8/63 to 12/63
Privately supported workshop for Mentally Retarded Children	1/64 to 9/66

I. Q. Test Scores (Wechsler equivalent)

Date of Test	Score
11/66	80
9/67	92
5/68	89

Psychological Evaluation

Subject #2 was referred for psychological evaluation by Mr. Robert Lennan, Supervising Teacher of the Pilot Project, as part of periodic reevaluation procedure for the Pilot Project enrollees.

Sample Case History cont'd
Subject #2

Subject #2 was first evaluated at this school in November, 1966. He is the youngest of eight siblings of Indian-Mexican parentage. The oldest sibling is presently 31 years of age. Subject apparently is the only deaf person in the family.

Subject is a nice looking boy of average size for his age. He has the appearance of a child with the Waardenberg syndrome. Subject's mother attributes his blue eyes to the fact that his great grandfather was of German descent.

Subject was seen at this school two times prior to his 1966 evaluation for the Pilot Project, once for a hearing test when he was three years old and again for hearing and psychological evaluations in 1965. It was determined then that he was not eligible to be admitted to this school because of low mental ability. At the time of the 1966 evaluation, Subject was attending the Foundation for Mentally Retarded Children of the Desert where he had been enrolled since January 1964.

The psychological report dated 11-9-66 included the following comments:

> "During the current testing period Subject was cooperative to a fault. He attempted to do everything for the examiner and he tried to explain his actions at the same time. His attempts to speak were limited to a prolonged 'Uhh' sound which he emitted through his teeth as he clicked them rapidly together. These attempts to speak were usually accompanied by gross gestures and an expression on his face which indicated he thought all was well understood. He seemed to be distracted by various test items and was unable to give full attention to the tasks at hand.
>
> On the Leiter Performance Scale Subject earned an I.Q. of 71 which corresponds to a Wechsler Score of about 80. It was felt by this examiner, however, that Subject might perform on a somewhat higher level if he were not impeded by poor concentration ability.
>
> Bender Gestalt responses and Human Figure Drawings reflected poor establishment of interpersonal relationships, dependency, and gross immaturity. There were no indications of brain damage.
>
> It is the feeling of this examiner that Subject is an emotionally disturbed deaf child who may also suffer from mild retardation. It is not unlikely that Subject's low I.Q. score could be attributed, in part, to his emotional immaturity, his distractibility, and his poor application and that he may have at least low Average intellectual potential."

Sample Case History cont'd
Subject #2

On November 14, 1966, Subject was admitted to the Pilot Project Program and in September, 1967, the Leiter International Performance Scale was readministered to Subject. At that time he earned an Intelligence quotient of 85 which represents an increment of 14 points over and above his 1966 test score. This second I.Q. score corresponds to a WISC score of approximately 92 and reflects low Average intellectual functioning. It was noted during this second evaluation period that Subject applied himself extremely well and showed a marked increase in attention span. He asked for clarification of procedures through natural signs and some fingerspelling. ("I, paper, 'his name'). There was no display of bizarre behavior and he did not vocalize meaninglessly as he had done during his previous test (11-9-66).

On the Raven's Matrices he earned a Percentile rank of 40 which also falls within the Average range. Human Figure Drawings reflected excessive social and emotional immaturity and egocentricity. While he drew, Subject explained his drawings. Through gestures and conventional signs he told me that his father no longer has a cast on his arm and that he can straighten it now. He said that there was still a cast on his father's foot. He explained that his mother had no casts and he asked if he should draw a picture of his sister.

It was the feeling of this examiner at that time that Subject had made marked improvement during his first year in the Pilot Project both in regard to his ability to work at a task and in his ability to relate to others.

During the present evaluation period the Leiter International Performance Scale was once again administered to Subject #2. At this time he earned an I.Q. of 82 which corresponds to a Wechsler Score of approximately 89 and reflects intellectual functioning at the top margin of the Dull Normal range. During the entire evaluation period Subject appeared to be very interested in the test tasks. He showed good application and good attention span and there were no manifestations of silly behavior as had been noted in the past.

It is the feeling of this examiner that Subject #2 is a boy of at least Low Average intellectual functioning. Although he has made significant growth over the past two years while being an enrollee in the Pilot Project Program, it is unlikely that Subject will ever function academically above the Dull Normal level. Because of his moderate to severe academic retardation, it is very likely that Subject will always have to be included in a special class for youngsters with learning problems.

Sample Case History
Subject #2

Neurological examination

Date of examination: January 27, 1967

HISTORY: This boy is his mother's third child, born after a full term pregnancy during which no abnormalities were noted. The Rh status of the mother and father is not known. This boy was born at home with no one but his mother in attendance. She took care of all the formalities including cutting and tying the cord. The baby cried spontaneously and no abnormalities of the birth or neonatal period were noted. He has had no serious injuries. His early development was perhaps slightly slow in that he did not sit until 18 months nor walk until he was 22 months. His teething was delayed also. He has not learned to talk. No further details are available in the record as to when this boy's deafness was recognized. There is no suggestion as to the cause.

EXAMINATION - General - The patient is a fairly well-developed, somewhat thin 9-year-old white boy (birth date Aug. 26, 1957). He appears to be alert and is fairly cooperative. He is perhaps somewhat hyperactive.

NEUROLOGICAL EXAMINATION: Examination of the cranial nerves is difficult but no gross abnormalities in vision, visual fields, optic fundi, pupillary responses, or extraocular movements is noted. The patient is quite deaf although some hearing seems to be present when a stethoscope is placed in the child's ear and the diaphragm tapped he grimaces. The hearing seems to be slightly better on the left than on the right.

Examination of the motor system reveals the patient to be left handed. He is able to copy script fairly accurately. No gross weakness or paralysis is noted. Cerebellar functions are intact. The deep reflexes are active and equal and no pathological ones are elicited.

Examination of the sensory system reveals no obvious abnormalities.

IMPRESSION: Deafness, severe, both ears but slightly greater on the right, cause undetermined.

No other gross evidence of organic disease of the nervous system.

Sample Case History cont'd
Subject #2

Hearing Loss

	125	250	500	1000	2000	4000	8000
R.E.		No response					
L.E.				No response			

Reading and Achievement Test Scores

Gates Reading Tests

Date of Test	Word Recognition Grade Level	Sentence Reading Grade Level	Paragraph Reading Grade Level	Average
11/66	Not able to perform test			
6/67	0	1.7	2.1	1.26
11/67	1.7	2.1	1.55	1.78
4/68	2.23	2.27	2.15	2.22

Stanford Achievement Tests

Date of Test	Word Recognition	Reading Paragraph Meaning	Vocabulary
6/67	1.0	1.1	
6/68	1.6	1.5	1.2

Gray-Votaw-Rogers General Achievement Tests

Date	Reading		Arithmetic		Educational
of Test	Voc.	Comp.	Reas.	Comp.	Grade
11/67	0	1.0	1.2	1.3	1.2
4/68	2.0	1.3	1.3	1.5	1.5

Sample Case History cont'd
Subject #2

Graphic Presentation of Judges' Rankings

The distribution of ranks assigned to the 24 observations made on Subject #2 is presented in Figure 7. Oscillation is very marked making any determination of overall trend questionable. It appears that his behavior was perceived as progressively unfavorable until the last Spring when it rose to a high point at 19, to drop again in the closing weeks. Note the lowest point rated was with a substitute teacher, observation 20. We are inclined to attribute the generally sinking ratings during the first three-fourths of the graph to the effect of the program in opening up a boy who was considerably withdrawn when starting the program. This meant more assertive behavior was described and the naive judges tended to rate this lower than quiessant behavior.

Graph Depicting Project Teacher's Evaluations of Behavior Change

The teacher's ratings of this subject's behavior based on the Developmental Sequence of Educational Goals as shown in Figure 8 indicate that the greatest changes occurred in the readiness levels of attention, response, and social behavior in the first year.

In the second year there was marked improvement on the five readiness levels and on the mastery level. Absence of intrinsic motivation is indicated by the continued low ratings on the achievement level.

Staff Ratings of Changes in Rapport with Adults and Peers

Staff members rated this subject as having made moderate improvement in his behavior with adults (mean rating 4.3) and peers (mean rating 4.0).

Entering Behavior

Subject babbled constantly to adults, peers, and to himself. He alternated between periods when he exhibited a warm, outgoing personality and periods when he seemed to be in a dream world with little or no contact with reality. These changes often occurred within a period of a few minutes and were completely unpredictable. He would suck his thumb and gaze off into space until interrupted by an adult. He was easily distracted from assigned tasks and often became disoriented. When reprimanded for his aggressive behavior with other children he would assume an air of complete innocence or his face would become a blank. He responded to praise and attention and to the checkcard system.

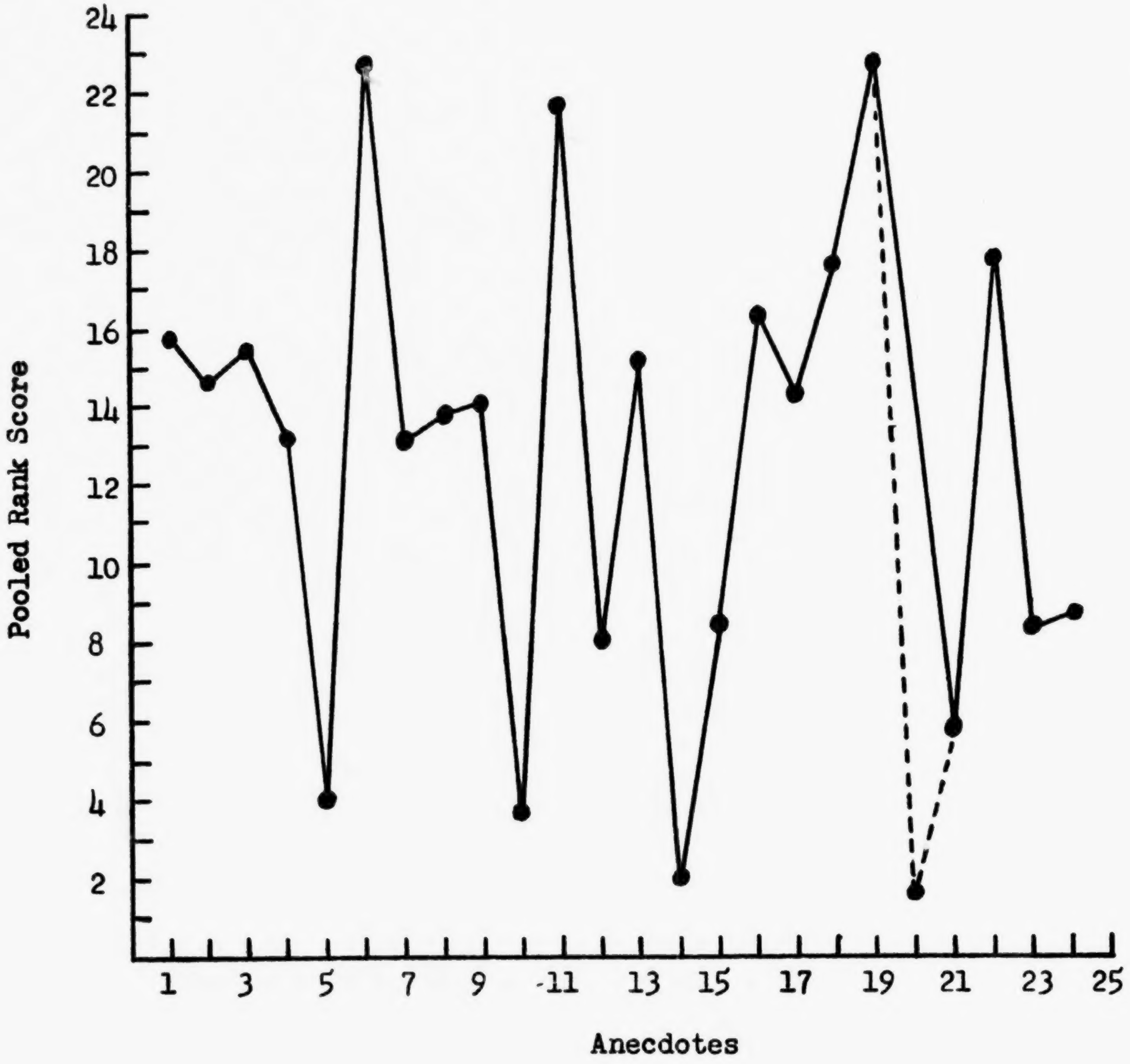


Figure 7. Distribution of ranks assigned to anecdotes. Subject No. 2.

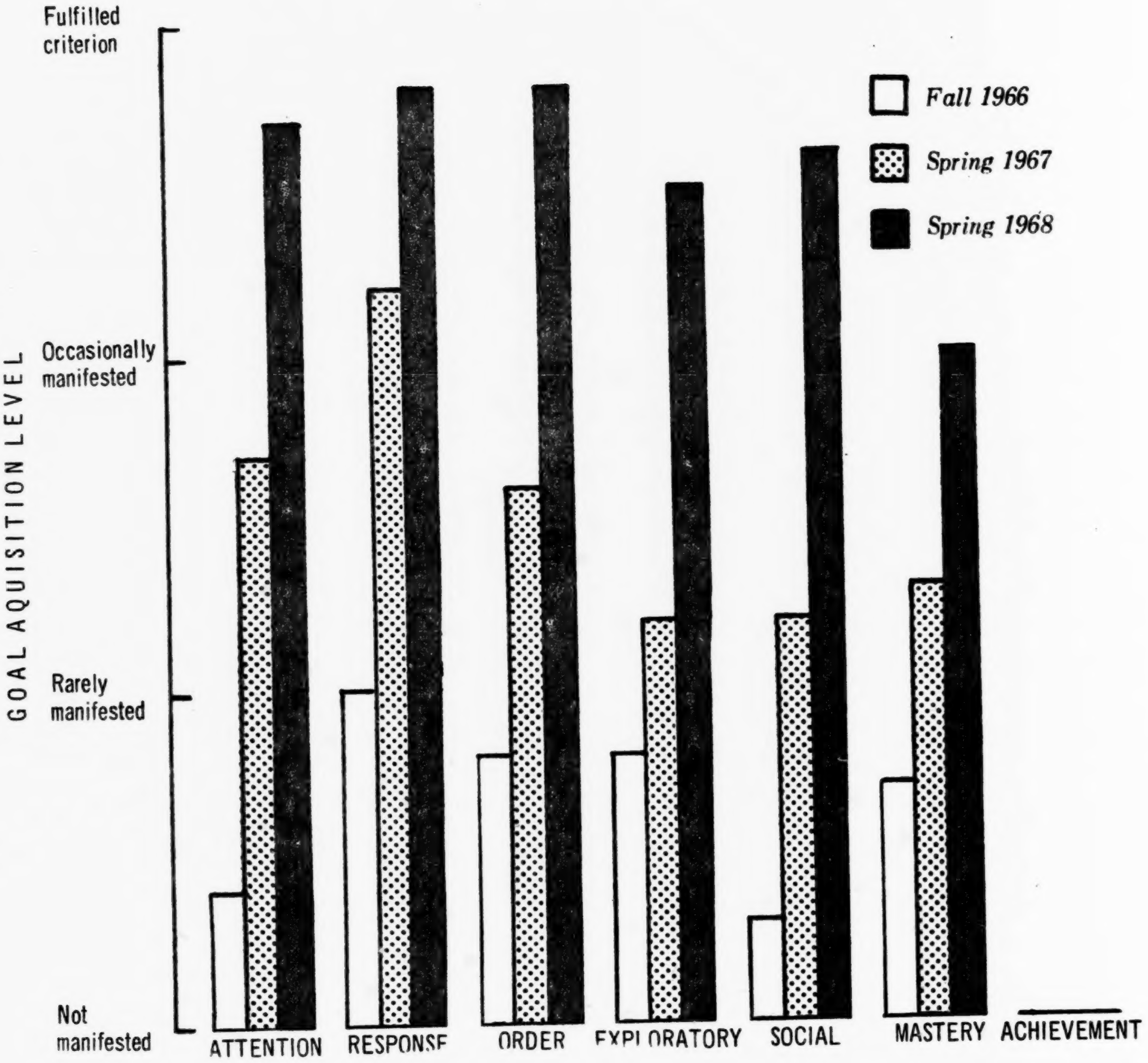


Figure 8. Comparisons of related gains in educational goals for Subject No. 2.

Subject initiated social contacts with some of the other boys in the project. He often used aggressive play activities as a means of inflicting injury on other children by kicking or biting them. Immediately following these incidents he feigned innocence or assumed a blank facial expression.

Terminal Behavior

Subject's babbling had ceased and he had become interested in developing his communication skills. He continued to lapse into periods when he was out of touch with reality in the classroom but when he was alert his work and behavior were satisfactory. He responded to praise and attention and to the use of the checkcard in modifying his behavior.

Subject engaged in normal play activities with peers. Aggressive behavior was greatly reduced and seldom resulted in injury to other children.

Current Status

Subject #2 is a day student in a class for educationally retarded children in the Elementary School at the California School for the Deaf at Riverside. His teacher reports that he is not making significant academic progress and is easily distracted. The dormitory counselors report that he relates well with his peers and members of the dormitory staff.

SAMPLE CASE HISTORY

Subject #4

Race: White

Birthdate: 11-1-58 Place of birth: Manhattan Beach, CA

Marital status of parents: Married

Father's occupation: Supervisor, Aerospace Industry

Mother's occupation: Teacher

Siblings: one sister, b.d. 1960; one brother, b.d. 1961

Onset of deafness: Birth Etiology: Unknown

Other deafness in family: None

Educational and/or institutional background

Name	Dates attended
Private Nursery School	11/62 - 11/63
Day School for Neurologically Handicapped	11/63 - 11/64
Day Class for the Deaf	1/63 - 6/63

I. Q. Test Scores (Wechsler equivalent)

Date of Test	Score
9/66	120
9/67	122
5/68	113

Psychological Evaluation

Subject #4 was referred for psychological evaluation by Mr. Robert Lennan, Pilot Project Supervisor, as part of routine re-evaluation procedure for Pilot Project participants.

Subject was first evaluated at this school on December 2, 1964, by Miss Grace Paxson, Supervising Teacher of the Lower School. At that time he was attending the Mark Keppel School. It is noted that apparently Subject had been excluded from the Mark Keppel School in June, 1963, because of hyperactive behavior, but was readmitted at a later date. In the interim he was placed in the Children's Lighthouse and Research which is a residential school for children with behavior problems. He attended there a year, remaining at the school during the week and spending weekends at home. Considerable improvement was noted in Subject's behavior during the time spent at the Lighthouse.

Miss Paxson indicated in her report that during the evaluation of Subject, his attention span was very short. She indicated that stern measures were required to get his attention for more than a few fleeting seconds. Miss Paxson concluded her report with the following paragraph:

> "There is evidence that Subject might be a disturbed child; however, it seems likely that his needs as a deaf child are not being adequately met. It is believed that he is of average intelligence and should be able to respond to a well structured program. It is recommended that if he is admitted to this school, that it be on a trial basis only. While he possibly would be able to adjust to a classroom situation with a small group of children, there would be a question as to his adjustment in the residential hall with a greater number of children."

Subject was not admitted to CSDR in the fall of 1965, but was re-evaluated in September 1966 to determine his eligibility for the Pilot Project Program. During that evaluation period, which took place in the Subject's home, he was administered the Leiter International Performance Scale, the Bender Gestalt test, and the Human Figure Drawings. The psychological report dated 9-7-66 included the following information:

> "Subject entered the testing situation with no apparent anxiety. It was observed, however, that whenever he noticed another person looking into the room, particularly his brother, he screamed vociferously. His attention span was very good and he independently corrected many simple errors.
>
> On the Leiter Performance Scale, Subject earned an I.Q. of 119 indicating Bright Normal to Superior intellectual functioning. The Bender Gestalt responses and Human figure Drawings coupled with case history information strongly suggests emotional involvement centered around an extremely poor social adjustment and manifested in overt aggressive type of behavior. There were no indications of central nervous system pathology.
>
> It was observed throughout the testing period that Subject manipulated the test materials alternately with his right and his left hand. Information from this boy's file indicates he has had a

> history of mixed laterality difficulties. He is left-eyed, but has not established hand dominance. At the Children's Lighthouse School where he attended as a residential pupil in 1963 and 1964, it was observed that 'the attempt to make him right-eyed and right-handed evolved that he stopped speaking and making progress in speech. When an attempt was made to make him left-handed to match his left eye, his speech improved rapidly.' During the current visit to the Subject's home, the parents expressed a great deal of concern about this problem. The parents also stated that he is under constant medication and that when the medication wears off, he appears to have a 'different personality'. He becomes hyperactive and needs to be watched every minute."

In September 1967, Subject was re-evaluated by this examiner. The Leiter International Performance Scale and the Human Figure Drawings were readministered as well as the Raven's Progressive Matrices. On the Leiter, Subject earned an I.Q. of 121 which corresponds to a Wechsler score of about 122 and falls above the 90th Percentile. On the Raven's Matrices, Subject earned a Percentile Rank of 95 reflecting very Superior intellectual potential. The Human Figure Drawings continued to be immature and reflected strong feelings of body inferiority and an extremely poor social orientation. It was the feeling of this examiner at that time that his greatest problems continued to be centered around his poor self-image and his poor relationship with his environment. It was felt, however, that he was beginning to experiment with social interactions and seemed to be beginning to establish some meaningful relationships with his peers. It appeared at that time that he would probably continue to show steady improvement in emotional and social adjustment.

During the present evaluation period, the Leiter Performance Scale was once again administered. It was noted throughout the evaluation period that Subject persisted in attempting to use a trial and error approach to problem solving. This approach may have been caused by the fact that his Physical Education period was to begin at 10 o'clock and he was very concerned about the time. He worked quickly and made few corrections. During this evaluation period, Subject earned an I.Q. of 111 which corresponds to a Wechsler Score of about 113 and falls within the Bright Normal Range of Intelligence.

In spite of the fact that Subject's score was considerably lower than earlier test scores, he was able to relate on a much more sophisticated level with the examiner. He asked several questions and was anxious to give explanations in regard to his test responses. Although he was concerned about the possibility of missing his P.E. period, he did not display the overt hyperactive behavior that one might have expected.

In summary, Subject #4 is a boy of Bright Normal to Superior intellectual potential who because of severe adjustment problems has been unable to function in a regular academic classroom with normal deaf pupils. It is the feeling of this examiner that over the past two years, Subject has made sufficient adjustment to be considered for admission into the regular elementary program at this school. It is not unlikely that in time he will function on an Above Average academic level.

Neurological Examination

Date of examination: January 27, 1967

HISTORY: Little history is available on this patient, but he was said to have been born at full term in a Torrance, California Hospital. Instruments were said to have been used but no other abnormalities were reported and he is said to have weighed 6 lbs. The pregnancy leading to his birth, however, included rather severe urinary difficulties in the mother with hydronephrosis, high fever, treated with dihydrostreptomycin and finally a nephrectomy. The patient's deafness has been related to this rather traumatic episode in his prenatal life. He has apparently been hyperactive and has been on dextroamphetamine compounds in rather large doses. He has also been receiving some Mysoline and Dilantin. No record is found of any convulsive seizures. The time that his deafness was first noted is not recorded.

EXAMINATION - General - The patient is a somewhat small but fairly well-developed 8-year old boy in no acute distress. He is alert, cooperative, and oriented. He seems to catch on very quickly and was very helpful during the examination. His general physical condition is good except for being a little undernourished.

NEUROLOGICAL EXAMINATION: Examination of the cranial nerves including vision, visual fields, optic fundi, pupillary responses, extraocular movements, etc. is essentially normal except for the hearing which is markedly decreased though present in both ears to a very slight degree. He wears a hearing aid and hears though apparently does not understand what is said necessarily. He says a few words, counts to five understandably but not clearly.

Examination of the motor system reveals no abnormality of station. The patient's gait is essentially normal although he turns his left foot in slightly. He is right handed and his grip is fairly good bilateraly. No gross weakness or paralysis is noted. Cerebellar functions are intact. The deep reflexes are active and equal and no pathological ones are elicited.

IMPRESSION: 1. Deafness, bilateral, severe but not complete
2. No definite evidence of organic disease of the nervous system

Hearing Loss

	125	250	500	1000	2000	4000	8000
R.E.	60	65	75	95	-		
L.E.	55	70	80	-			

Reading and Achievement Test Scores

Gates Reading Tests

Date of Test	Word Recognition Grade Level	Sentence Reading Grade Level	Paragraph Reading Grade Level	Average
11/66	0	--	--	--
6/67	1.95	2.37	1.55	1.95
11/67	2.03	2.17	1.7	1.97
4/68	2.1	2.4	2.1	2.2

Stanford Achievement Tests

Date of Test	Word Recognition	Reading Paragraph Meaning	Vocabulary
11/66	1.2	--	--
6/67	1.0	1.6	
6/68	1.4	1.7	1.2

Gray-Votaw-Rogers General Achievement Tests

Date of Test	Reading Voc.	Reading Comp.	Arithmetic Reas.	Arithmetic Comp.	Educational Grade
6/67	1.4	1.5	1.2	2.3	1.6
4/68	1.8	2.1	1.2	2.1	1.8

Sample Case History cont'd
Subject #4

Graphic Presentation of Judges' Rankings

Figure 9 presents the distribution of 24 anecdote ratings for Subject 4. An upward overall trend is easily seen in this array. A slight cycling is noted with a decline during the middle of the second year, then a general rise through the spring. Several marked oscillatory shifts are present. Note again the drop at the last observation.

Graph Depicting Project Teacher's Evaluations of Behavior Change

The teacher's ratings of this subject's behavior based on the Developmental Sequence of Educational Goals as shown in Figure 10 indicate that the greatest changes occurred on the readiness levels of attention, response, order, and social behavior and on the mastery level. Behavior on the readiness levels was stablized in the second year with a continued upward trend in social behavior while performance on the mastery level dropped off.

Staff Ratings of Changes in Rapport with Adults and Peers

Staff members rated this subject as having made moderate improvement in his behavior with adults (mean rating 4.3) and peers (mean rating 4.2).

Entering Behavior

Subject was extremely hyperactive. He constantly attempted to manipulate adults to control situations. He was compulsively neat and voluntarily initiated housekeeping tasks. This was seen as a subtle device to avoid carrying out tasks which had been assigned to him by staff members. Subject often laughed inappropriately and displayed silly acting out behavior. He frequently displayed inappropriate behavior in an attempt to get an adult to chase him. It was noted that a general unkempt appearance usually preceeded flareups of bizarre acting out behaviors. He began to respond to the checkcard after a few weeks of trial and error in finding a meaningful reward for him. He did not respond to social approval.

Subject had poor relationships with peers. He usually disregarded their presence or would hit, pinch, or throw objects at other children who attempted to initiate contact. When he did initiate social contact it was always on his terms.

Terminal Behavior

Subject was able to remain in his seat for longer periods of time and would raise his hand to get the teacher's attention. His attention

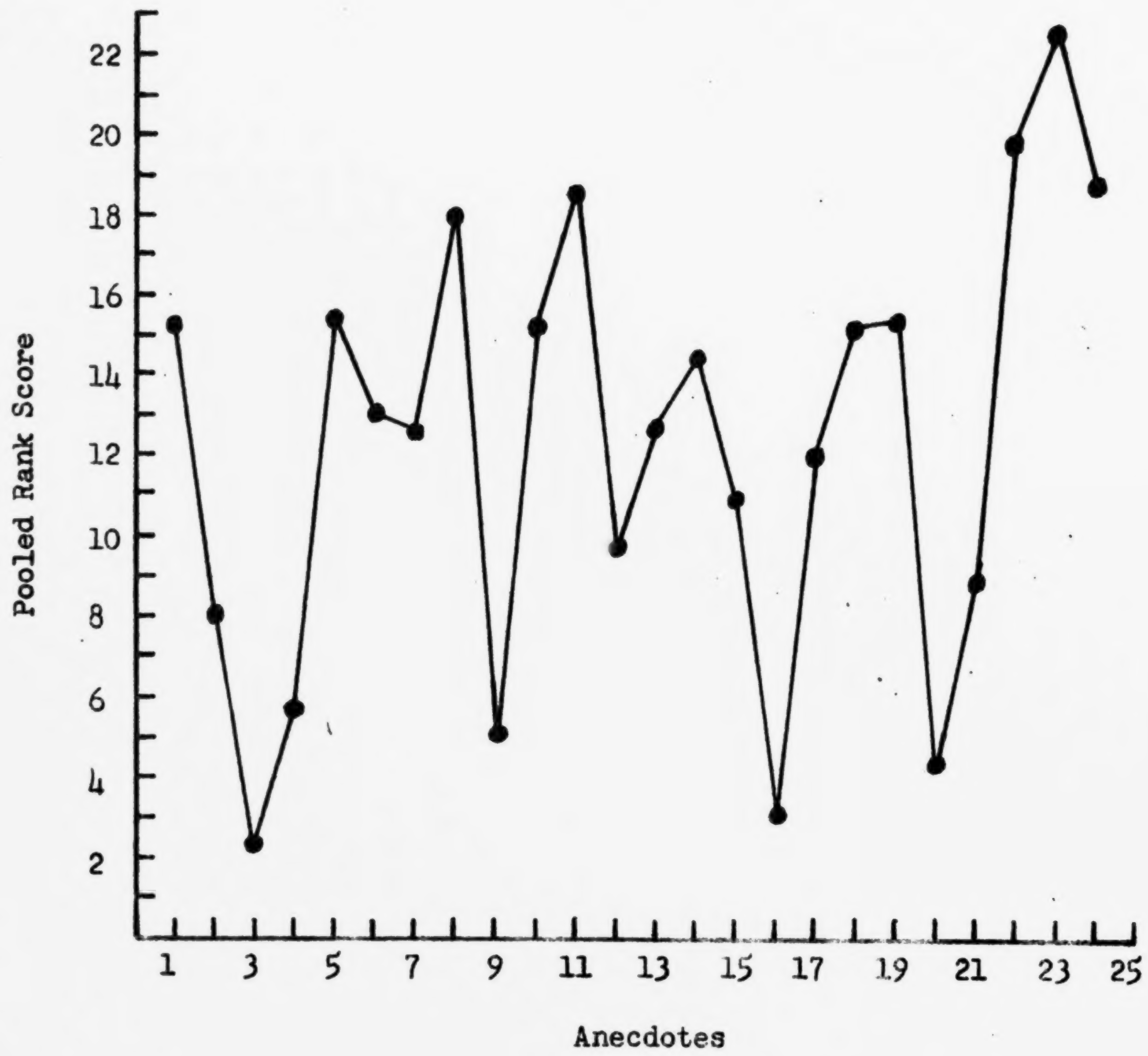


Figure 9. Distribution of ranks assigned to anecdotes. Subject No. 4.

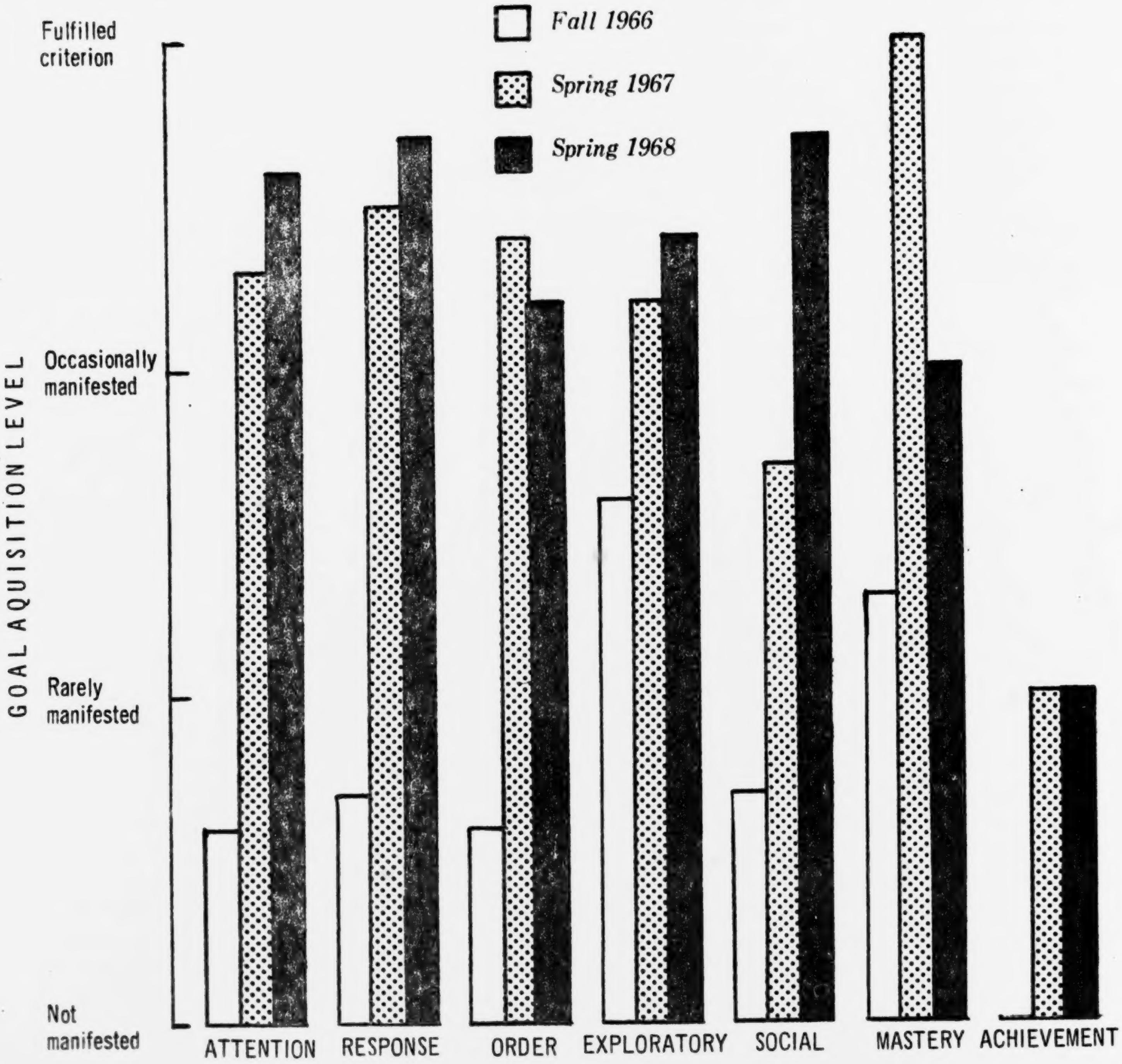


Figure 10. Comparisons of related gains in educational goals for Subject No. 4.

span had increased and he completed assigned tasks. His compulsive neatness was still seen occasionally but not to the extreme extent noted at the beginning of the project. His periods of hyperactivity, bizarre laughter and inappropriate behavior were shorter in duration. He responded to praise and attention and attempted to explain himself when he felt that he had been misunderstood. The checkcard system was highly effective in modifying and maintaining his behavior.

Subject entered into group activities willingly and was usually able to maintain appropriate relationships with peers. He continued to attempt to manipulate other children but to a lesser degree.

Current Status

Subject #4 is a residential student in the Elementary School at the California School for the Deaf at Riverside. Reports from his teacher and the counselors in his dormitory indicate that he is making slow academic progress and is adjusting to his new environment. He is having some difficulty in his relationships with his peers.

SAMPLE CASE HISTORY

Subject #5

Race: White

Birthdate: 10/31/56 Place of birth: Corona, California

Marital status of parents: Divorced - Mother remarried

Father's occupation: Car Salesman

Mother's occupation: Beautician

Siblings: one sister, b.d. 1954

Onset of deafness: Birth Etiology: Anoxia at birth

Other deafness in family: None

Educational and/or institutional background

Name	Dates Attended
Residential School for the Deaf	9/62 - 10/66

I. Q. Test Scores (Wechsler equivalent)

Date of Test	Score
12/60	116
11/62	103
9/67	135
5/68	153

Psychological Evaluation

Subject #5 was referred for psychological evaluation by Mr. Robert Lennan, Pilot Project Supervisor, as part of routine re-evaluation procedure for Pilot Project participants.

Subject is the younger of two children of divorced parents. His mother is remarried to a gentleman employed as an automobile salesman. Subject is the only deaf member of his family. It is indicated on the application for admission to this school that Subject's deafness was caused at birth from lack of oxygen.

Case history information on this boy indicates that the parents noted hyperactive behavior at around 18 months and that he was very aggressive toward other children at two years. Another significant item of the birth history was a birth weight of five pounds, three ounces and a history of neonatal apnea for seven minutes. The child was kept in an incubator for four days and was sent home at four days of age. The mother describes elements of obsessive, compulsive behavior such as marked attachment to peculiar objects such as can openers, telephone poles, fluorescent lights, plants, and animals. He is described as a defiant and very active child who tends to wander away from any given situation. His persistence and determination to do anything he wants has been extreme. He has appeared to have no comprehension or fear of danger. To the parents, he has been consistently described as being very defiant and none of the disciplinary measures the parents have used have seemed to work.

Subject was first admitted to California School for the Deaf in September 1962. Because of his severe psychological maladjustment and his overall bizarre behavior, he was transferred to the Pilot Project in September 1966. Previous psychological evaluations yielded the following results:

Test	Date Administered	Results
Leiter International Performance Scale	12-5-60	I.Q. 114
Leiter Performance Scale	11-14-62	I.Q. 104
Leiter Performance Scale	9-27-67	I.Q. 133
Raven's Matrices	9-27-67	Above 95th Percentile

Previous Human Figure Drawings were pathological in nature. It is noted in the 1967 psychological report that when Subject was asked to draw a human figure he produced a large stoical male bust with no ears or arms. He than went on to produce a complete male figure and a complete, but larger and more aggressive female figure. On both of these figures, the joints were very much accentuated giving the figures the definite appearance of having been strung together. On both figures the fingers were missing although palms were present. The ears were missing and the eyes were unseeing.

The joint emphasis was of a nature occasionally present in the drawings of the schizoid individual or the body narcissist in decline and may indicate a warding off of feelings of body disorganization. Although neither of these labels should be applied to the Subject at this time, it can and should be explained that joint emphasis is rarely seen in drawings except in cases where a peanut man is drawn. Most male figures that do involve joint emphasis are in a setting of mother dependency, psychosexual immaturity, and are paired with a female figure that is more aggressive, larger, and more dominant than the male figure as was the case in Subject's drawings. The hand and eye treatment were of a nature suggesting repressed aggression or furtive outbursts of aggression as well as a deliberate shutting out of the environment in order to better concentrate on own self.

Mr. Robert Lennan, Supervising Teacher of the Pilot Project, has reported that since Subject's enrollment in the Program, Subject's mother continues to be extremely overpermissive with him and while he is at home, there is little established control. Subject's mother apparently has had extreme difficulty establishing behavioral limits for him and although she expresses a desire to do so, she seems to actively avoid the problem.

In regard to Subject's behavior since his enrollment in the program, he has been aggressive in his behavior and has frequently struck out at others without thinking the problem through. His interests have been pathological in their intensity. For the first year of his inclusion in the Pilot Project, he was intensely attracted by lights, particularly fluorescent lights as mentioned earlier in this report and would stare at them at every opportunity, draw them obsessively and collect them in profusion. During the same period of time most of Subject's free play was either centered around lights or around playing the part of a mother hen. This latter activity usually involved the building of a nest on the ground, sitting on the eggs (rocks), and hovering over and caring for the other children as though he were their mother and they the baby chicks. He also had an intense interest in all animals and in their body processes.

He had several different species of animals at home and spoke of them frequently. At the present time he is preoccupied with the collecting of bottles and his mother reports that he has many stored in the family garage. He is particularly excited by Nehi bottles with yellow labels.

During the present evaluation period, the Leiter International Performance Scale was once again administered to Subject. He was very much interested in the testing materials and spent a great deal of time looking over the blocks and strips in what might be described as a very erratic manner. He was very much aware that the subtests presented to him had not been presented to him previously.

Subject established his Basal Age at the 10 year level and successfully accomplished two subtests at the 12 year level, three subtests at the 14 year level, all of the subtests at the 16 year level, and two subtests at the 18 year level. His I.Q. earned on this test was 154 which falls at the 99th Percentile and represents Very Superior intellectual functioning.

In summary, Subject #5 is a deaf boy of Very Superior intellectual potential who suffers from severe psychological maladjustment. There are indications that he suffers from an uncertain sense of body integrity, poor psychosexual adjustment, repressed aggression, and excessive concentration on own body narcissism. During the past two years of Subject's enrollment in the Pilot Project, considerable improvement has been made in his overall behavior patterns. Much of this growth can be attributed not only to the special teaching methods used within the program, but also to the changing attitudes of Subject's mother. If the reported attitude changes of his mother continues, this, combined with the consistent and accepting provisions of his teachers, should lead to increased utilization of his potential. It is understood by this examiner that in the coming school year Subject will be enrolled at this school as a day pupil and will be included in the regular Elementary School program. It is felt by this examiner that Subject is not quite ready to make this change in his academic program and that considerable regression in his behavior patterns might be noted. The fact that there is a new father in the home who, according to Subject's mother, has a definite calming influence on Subject, may be of considerable influence in helping him make the needed adjustment to the regular academic program at this school.

Neurological Examination

Date of Examination: 1-13-67

HISTORY: This boy was born after what was an apparently normal pregnancy, about three weeks premature, weighing 5 lbs. 3 oz. The actual delivery was apparently normal. The only features of possible importance in the history of the pregnancy was that the mother was in contact with the German measles at the third month but did not apparently contract the disease, also about the fifth month she had a fall without serious sequelae. The only medication of any significance which she had during this time was 200,000 units of Bicillin. The mother is Rh negative but the child is also said to be Rh negative. In the perinatal period it is said that the child did not breathe for perhaps seven minutes due to a "mucous plug". He was placed in an incubator for three days but left the hospital with his mother. This boy held up his head at two months, sat up at six or seven months, and walked alone at sixteen months. Teeth eruption was essentially normal. This boy has had no serious medical illnesses but was struck by a car in July 1963 resulting in a fracture of the right lower extremity. He has had some behavioral difficulties, flying into a rage easily even at an early age. His deafness was recognized before he was eighteen months of age and he has been evaluated by the Tracy Clinic. He is diagnosed as having rather severe perceptive deafness of a congenital type but with certain residual islands of hearing.

EXAMINATION - General - The patient is a fairly well-developed, fairly well-nourished 10-year-old boy (the date of his birth is apparently recorded incorrectly, it should be 1956). His general physical condition is good and no gross abnormalities are noted.

NEUROLOGICAL EXAMINATION: Examination of the cranial nerves including vision, visual fields, optic fundi, pupillary responses, extraocular movements, etc. is essentially normal except as relates to hearing where there is a moderately severe loss bilaterally.

Examination of the motor system reveals no abnormality of station or gait. The patient has a good grip bilaterally. No gross weakness or paralysis is noted. No significant apraxia or ataxia is noted and cerebellar functions are intact. There is no evidence of disease of the sensory system. The spinal cord and peripheral nerves are intact. The deep reflexes are active and equal and no pathological ones are elicited.

IMPRESSION:
1. Perceptive deafness, bilateral, probably congenital in type
2. No other gross evidence of organic disease of the nervous system

Hearing Loss

	125	250	500	1000	2000	4000	8000
R.E.	70	65	75	85	95	100	-
L.E.	65	60	80	90	90	95	75

Sample Case History cont'd
Subject #5

Reading and Achievement Test Scores

Gates Reading Tests

Date of Test	Word Recognition Grade Level	Sentence Reading Grade Level	Paragraph Reading Grade Level	Average
11/66	2.33	2.33	2.9	2.5
6/67	2.9	3.1	2.6	2.9
10/67	2.8	3.1	2.4	2.8
4/68	3.05	3.4	2.6	3.02

Stanford Achievement Tests

Date of Test	Word Recognition	Reading Paragraph Meaning	Vocabulary
11/66	1.9	1.5	1.5
6/67	2.3	1.6	1.2
6/68	2.2	1.6	1.0

Gray-Votaw-Rogers General Achievement Tests

Date of Test	Reading		Arithmetic		Educational Grade
	Voc.	Comp.	Reas.	Comp.	
6/67	1.6	1.7	1.0	2.7	1.9
4/68	2.3	2.1	1.9	3.2	2.3

Graphic Presentation of Judges' Rankings

The distribution of ranks assigned to 26 observations taken on Subject #5 are given in Figure 11. This array does not show any noteworthy overall trend unless it is to oscillate around a mean rating of about 13 during the entire second year. Curiously, an envelope drawn to enclose this array spindles in the middle implying more stability in the Winter of the second year than in the closing Spring.

Graph Depicting Project Teacher's Evaluations of Behavior Change

The teacher's ratings of this subject's behavior based on the Developmental Sequence of Educational Goals as shown in Figure 12 indicate that the most significant changes occurred on the readiness and achievement levels. Behavior at the end of the second year was rated at or near optimal levels.

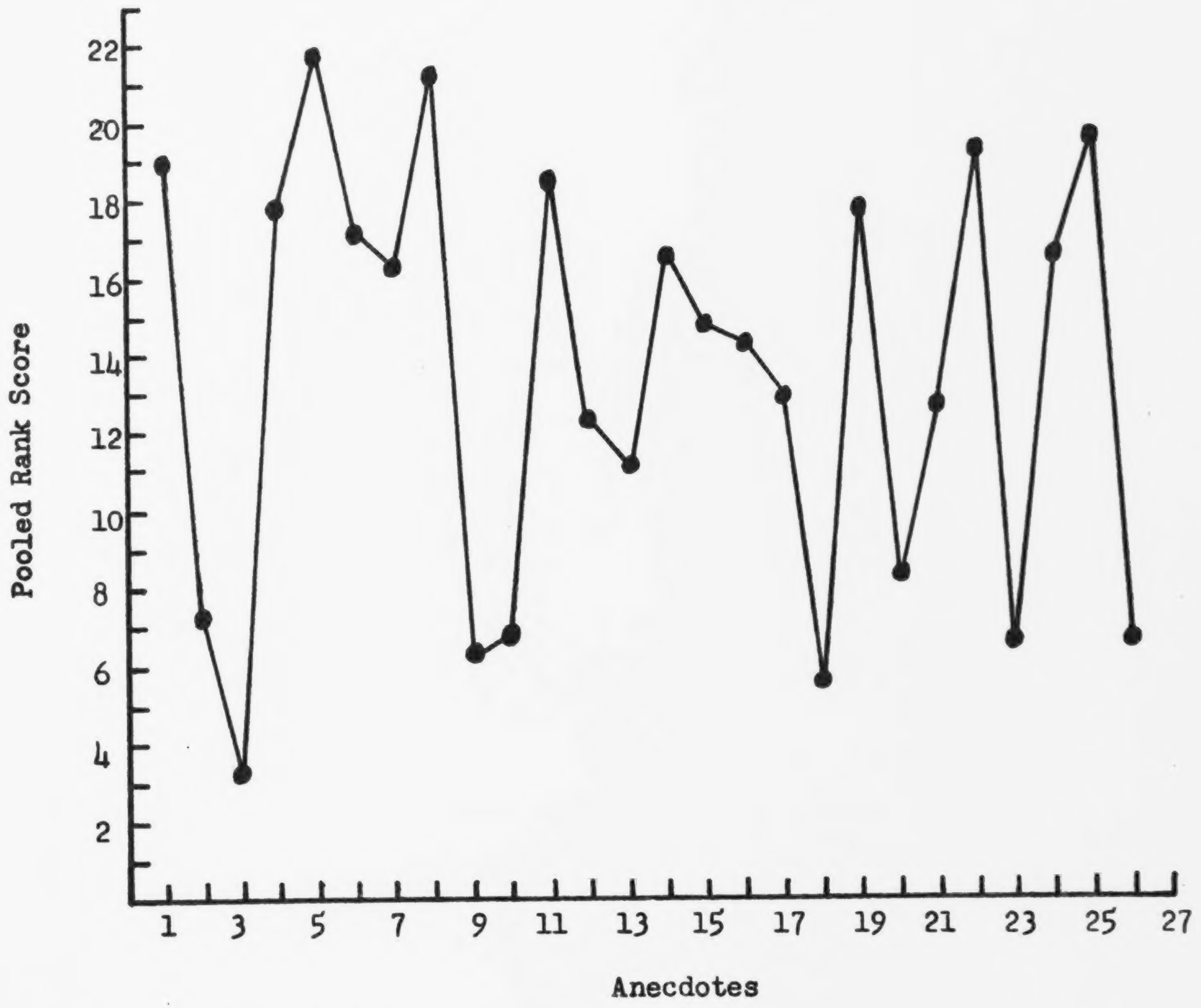


Figure 11. Distribution of ranks assigned to anecdotes. Subject No. 5.

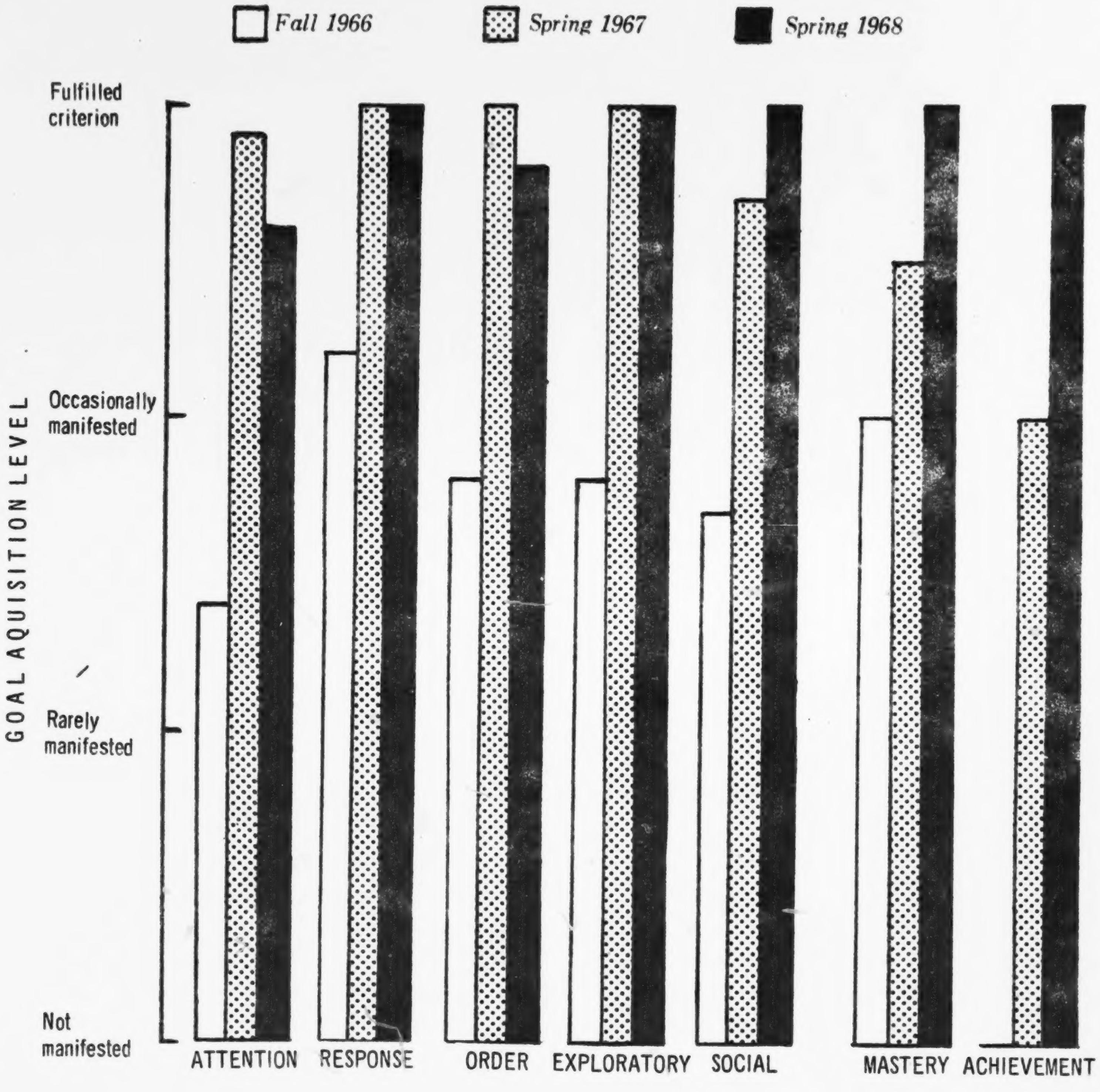


Figure 12. Comparisons of related gains in educational goals for Subject No. 5.

Staff Ratings of Changes in Rapport with Adults and Peers

Staff members rated this subject as having made moderate improvement in his relationships with adults (mean rating 3.8) and peers (mean rating 3.9).

Entering Behavior

Subject exibited great deal of inappropriate acting out behavior when his desires were thwarted. He would build up to temper tantrums that involved screaming, throwing objects, and physical aggression. He showed no sign of feeling repentent when these tantrums subsided. Although he apologized it was quite insincere and seen as a device to avoid facing the consequences of his actions. Subject constantly drew pictures of flourescent light fixtures, stared at light fixtures, and wished to discuss them constantly with peers and adults. His other communication with adults and peers was restricted almost entirely to scolding or demanding. Rewards for appropriate behavior did not impress him at the beginning of the project. It was felt by the project staff that this was due to the fact that his mother supplied him with anything he demanded of her, and therefore the rewards available in the project were not attractive to him. His mother agreed to follow the methodology used in the project and have the Subject earn the things he wanted at home. Checkcards and the resulting rewards then became more effective in modifying his behavior. Subject could not tolerate normal social activities with other children unless he organized and initiated group play. He expressed his hostility toward peers by teasing and causing group tension. Although he had many varied interests, these interests were often compulsive, such as collecting (to an extreme) all manner of objects such as bottle caps in great quanities. He was adept at devising and constructing creative, detailed, complex projects. He preferred to be left alone to follow his own pursuits rather than participate in group activities. He could not tolerate interruptions when involved in a project of his own choosing. Subject had almost total indifference for the opinions of adults. He frequently initiated and participated in sexual acting out behavior or in play depicting a mother bird hatching eggs or a mother monkey nursing her babies. He always assumed the mother role and was never observed assuming the father role. In the classroom he continually complained of being tired or injured to avoid attending to the assigned task. He worked slowly and reverted to drawing flourescent lights, daydreaming, and inappropriate vocalizing if his school day was not tightly structured.

Sample Case History cont'd
Subject #5

Terminal Behavior

Subject was communicating on a more normal basis with adults and peers. He became more mature in his behavior, but still tended to boss peers. His tolerance of adults and peers improved and he was able to control his temper better. Sexual acting out behaviors and mother image play was eliminated. Flourescent light fixation diminished, but he would still draw lights on occasion. His collections became more acceptable and appropriate. He continued to disrupt group activities. This was often seen as a device to try to be excluded and allowed to go his own way. He occasionally complained in the classroom of being tired but usually finished his assigned work rapidly.

Current Status

Subject #5 is a day student in a class for educationally retarded children in the Elementary School at the California School for the Deaf at Riverside. His teacher reports that he is making satisfactory academic progress and has adjusted to his new class. He continues to have some problems in his relationships with his peers.

SAMPLE CASE HISTORY

Subject #7

Race: White
Birthdate: 8-3-59 Place of Birth:
Marital status of parents: Married
Father's occupation: electrician
Mother's occupation: housewife
Siblings: two brothers
Onset of deafness: 7 months Etiology: Meningitis
Other deafness in family: None

Educational and/or institutional background

Name	Dates Attended
Day classes for the deaf	9-64 - 10-66

I. Q. Test Scores (Wechsler equivalent)

Date of Test	Score
10/66	110
9/67	96
5/68	106

Psychological Evaluation

Subject #7 was first evaluated by this examiner in his home as part of a visit to determine his eligibility for enrollment in the Pilot Project. The date of that evaluation was October 17, 1966. During that testing period, the Leiter Performance Scale was administered along with selected Bender Gestalt Designs and Human Figure Drawings. The psychological report from that evaluation period included the following comments:

> "Throughout the testing period Subject behaved in an extremely bizarre and silly manner. He frequently laughed loudly, hit his face, and clapped his hands over his eyes.
>
> On the Leiter, Subject established his Basal Age at the VI

> Year Level. He successfully completed three subtests at the VII Year Level, one subtest at the VIII Year Level, and three subtests at the IX Year Level. The resulting I.Q. was 108 which corresponds to a Wechsler score of about 110 and reflects intellectual functioning at the lower margin of the Bright Normal Range.
>
> Subject's Human Figure Drawings and Bender Gestalt responses reflected gross emotional immaturity and excessive difficulty relating to the environment. There were no indications of Central Nervous System Pathology."

It was the feeling of this examiner at the time of the 1966 evaluation that Subject was a severely emotionally disturbed boy of at least High Average intellectual functioning. Case file information shows that on the Thursday prior to the evaluation period, Subject had been excluded from the Long Beach day class program because of his hyperactivity. At the time of the evaluation period in the Subject's home, he was under sedation (Thorazine in liquid form), but was quite active in spite of this. It was necessary to prompt him frequently to get him to complete tasks during the testing procedure.

On the application for admission to this school, it is reported that Subject attended the Henry Longfellow School in Long Beach from September 1964 until October 1966. He then attended classes at the Benjamin Tucker School in Long Beach for a period of one month. Subject was admitted into the Pilot Project on October 20, 1966.

In September 1967, the Leiter International Performance Scale was once again administered to Subject. At that time it was noted that he had become much more calm in his behavior. Although he continued to pay poor attention to detail and had difficulty making relationships, he was able to make several meaningful changes. He did not behave in a silly manner as he had done in the previous evaluation period, but it was noted that he bit his fingernails throughout the examination period. At that time Subject earned an I.Q. of 90 on the Leiter Performance Scale which corresponds to a Wechsler Scale of approximately 96 and falls within the Average Range of intelligence.

It was noted that on several of the subtests that Subject was able to complete successfully during the evaluation period in his home, he was unable to complete successfully during the second evaluation.

During the present evaluation period, the Leiter Performance Scale was again administered yielding an I.Q. of 102. This score corresponds to a Wechsler I.Q. of approximately 106 and reflects High Average intellectual potential.

It was noted during this latest evaluation period that Subject continued to be very unsure of his own responses and unlike during earlier evaluations he was reluctant to make corrections.

During the two years of Subject's enrollment in the Pilot Project Program, it appears that his greatest growth has been in the area of overall behavior patterns and in his ability to concentrate on a given task. This growth has been reported frequently in both teacher and counselor progress reports.

On February 28, 1968, Subject was evaluated by Miss Grace Paxson, Supervising Teacher of the Lower School, to determine his eligibility for enrollment in that program. In Miss Paxson's evaluation report, there is no mention of bizarre behavior, but it was noted that he was inclined toward impulsiveness in his responses, not actually thinking through a task before responding. It was felt by Miss Paxson that Subject would be able to fit into a regular classroom situation in September 1968, and it was recommended that this be tried.

It is the feeling of this examiner that Subject continues to manifest many of the same problems observed during our first evaluation of this boy, but that they are now on a much more subdued level. If Subject continues to make progress in his adjustment as he has over the past two years, it is not unlikely that he will succeed academically on at least a Low Average level.

Neurological Examination

Date of examination: February 10, 1967

PAST HISTORY: This patient was his mother's third child. The pregnancy was threatened during the first month but hormones were given and the remainder of the pregnancy was relatively uneventful. The patient was born after ten hours of labor weighing 7 lbs. 11 oz. and measuring 19 1/4" in length. No abnormalities of the delivery or perinatal period were noted. He held his head up at eight months, sat at one year, and did not walk until he was almost two years of age. His first tooth appeared at about ten months. This patient is said to have had ear infections during childhood but his most serious illness was meningitis, apparently pneumococcal in type at seven months of age. His hearing difficulties are dated to that time. He has had no serious operations or injuries and his subsequent development has been fairly good. He has been tested many times and has essentially no hearing, though he responds slightly to some of the very lowest frequencies.

Sample Case History cont'd
Subject #7

EXAMINATION - General - The patient is a somewhat small but fairly normally developed seven-year-old white boy in no acute distress. He is very alert and cooperative though he apparently does not hear. His general physical condition is good and no gross abnormalities are noted.

NEUROLOGICAL EXAMINATION: Examination of the cranial nerves including vision, visual fields, optic fundi, pupillary responses and extraocular movements is entirely normal except for his auditory acuity which reveals complete deafness bilaterally to superficial testing.

Examination of the motor system reveals no abnormality of station or gait. He is right handed, his grip is good bilaterally. No gross weakness or paralysis is noted. Cerebellar functions are intact. The deep reflexes are active and equal. No pathological ones are elicited.

Examination of the sensory system reveals no abnormalities. There is no evidence of disease of the spinal cord or peripheral nerves.

IMPRESSION:
1. Deafness, bilateral, essentially complete.
2. No gross evidence of other organic disease of the nervous system.

Hearing Loss

	125	250	500	1000	2000	4000	8000
R.E.	70	80	95	-			
L.E.			No Response				

Reading and Achievement Test Scores

Gates Reading Tests

Date of Test	Word Recognition Grade Level	Sentence Reading Grade Level	Paragraph Reading Grade Level	Average
11/66	0			
6/67	1.85	2.37	1.65	1.95
11/67	2.33	2.67	2.3	2.43
4/68	2.45	2.5	2.3	2.38

Sample Case History cont'd
Subject #7

Reading and Achievement Test Scores

Stanford Achievement Tests

Date of Test	Word Recognition	Reading Paragraph Meaning	Vocabulary
11/66	No test		
6/67	1.2	1.4	
6/68	1.7	1.6	1.2

Gray-Votaw-Rogers General Achievement Tests

Date	Reading		Arithmetic		Educational
of Test	Voc.	Comp.	Reas.	Comp	Grade
Spring, 1967	1.3	1.0	1.3	1.2	1.2

Graphic Presentation of Judge's Rankings

The 27 anecdotes taken on Subject #7 are plotted in Figure 13. There is a progressive upward trend in these data though the slope is not so steep as for some subjects. A pattern similar to the previous subject is the considerable reduction in the fluctuation of behavior quality in the first half of the second year followed by substantial swings in the Spring data.

Graph Depicting Project Teacher's Evaluations of Behavior Change

The teacher's ratings of this Subject's behavior based on the Developmental Sequence of Educational Goals as shown in Figure 14 indicate that marked change occurred in the first year on all of the readiness levels and on the mastery level. Behavior was generally stabilized on the readiness levels in the second year with continued growth in social behavior and achievement.

Staff Ratings of Changes in Rapport with Adults and Peers

Staff members rated this subject as having made marked improvement in his relationships with adults (mean rating 4.7) and moderate improvement in his relationships with peers (mean rating 4.4).

Entering Behavior

Subject was extremely hyperactive. He had a very short attention span and was extremely mobile in the classroom setting. He was extremely

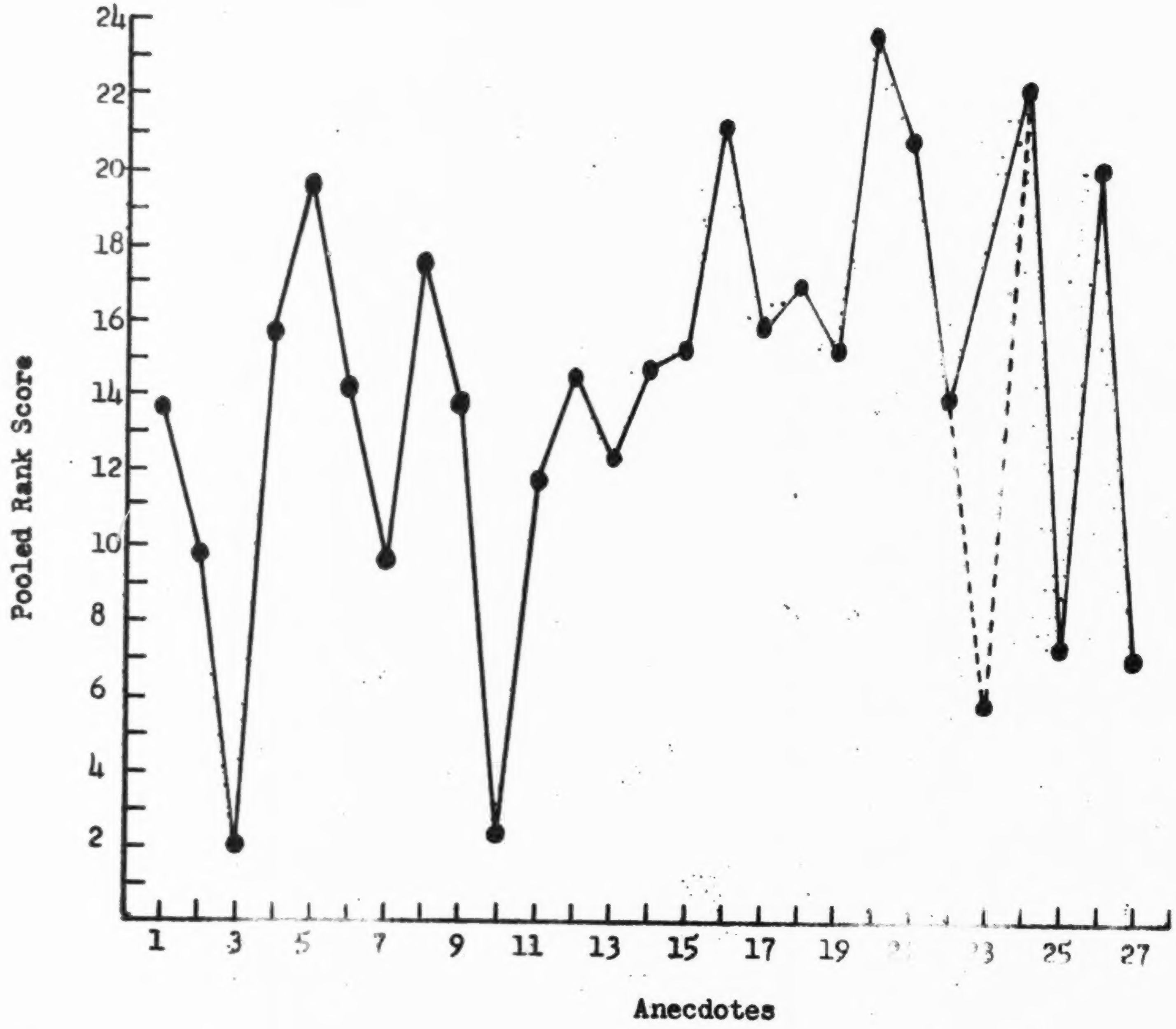


Figure 13. Distribution of ranks assigned to anecdotes. Subject No. 7.

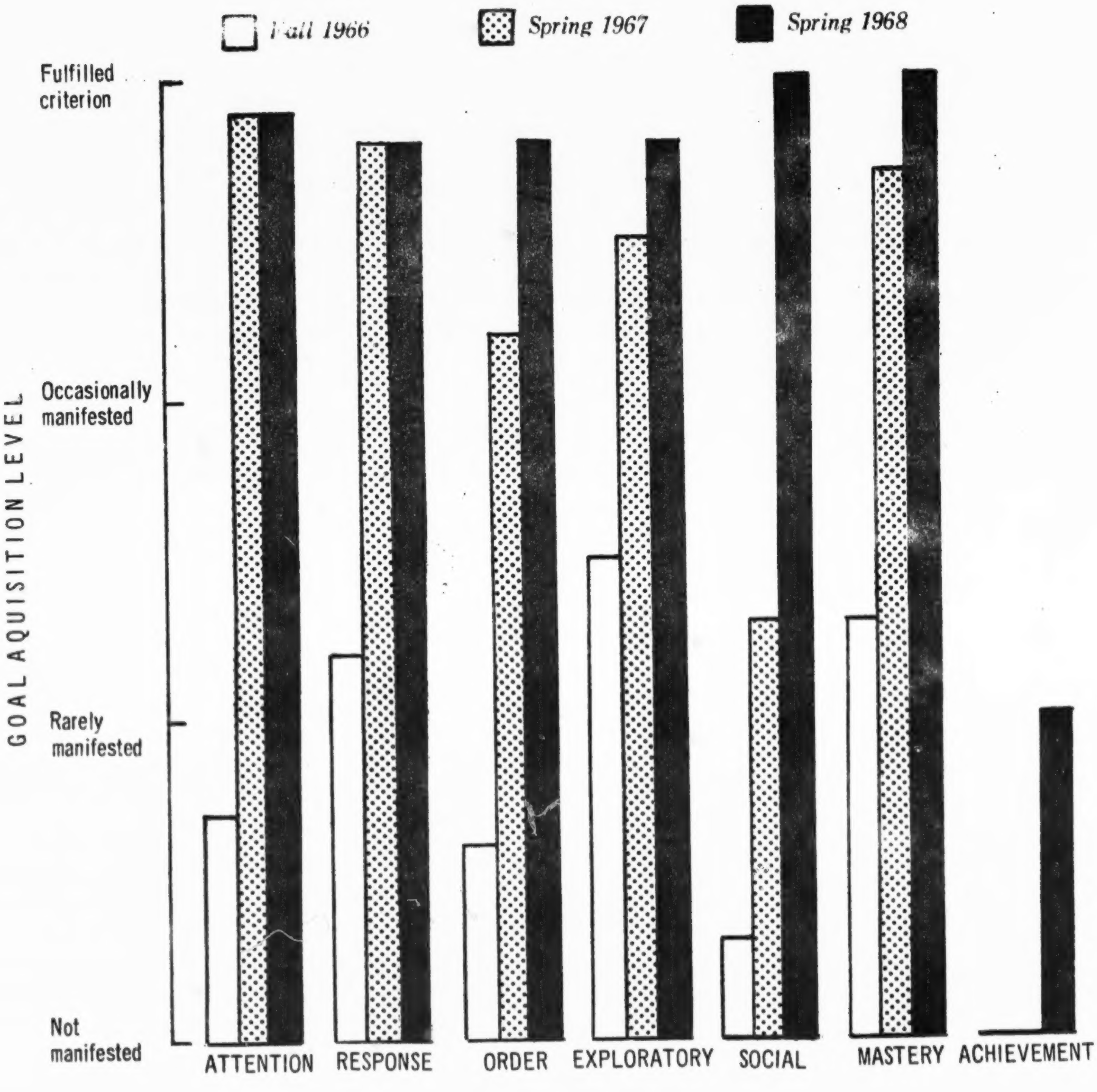


Figure 14. Comparisons of related gains in educational goals for Subject No. 7.

slow in completing assigned tasks. Behavior was generally silly and inappropriate. Medication (Thorazine, 25 mg. three times daily) did not seem to have a significant effect in reducing hyperactivity. Subject cried a great deal when he first entered the project.

Subject was anxious to relate with peers but did not know how to do so in an appropriate way. His behavior with other children was highly aggressive as evidenced by unprovoked biting, kicking, and shoving. This resulted in alienating or causing retaliation by other children. Subject was over-stimulated by normal play activities

Terminal Behavior

Subject responded more willingly to adult requests and comprehended instructions. He became interested in developing his communication skills. He became aware of the inappropriateness of his former behavior and consciously attempted to improve it. Attention span increased and he remained in his seat and completed task assignments throughout the day. Medication was withdrawn during the second year with no noticeable decrease in the level of behavior.

Subject continued to tease other children but discontinued physically aggressive behavior with them. He was able to enter into group activities with peers and enjoyed participation with them.

Current Status

Subject #7 is a residential student in the Lower School at the California School for the Deaf at Riverside. Reports from his teacher and the counselors in his dormitory indicate that he is making good progress academically and has adjusted to his new environment. He is experiencing some difficulty in establishing relationships with his peers.

SAMPLE CASE HISTORY

Subject #9

Race: Negro

Birthdate: 1-25-59 Place of birth: Brooklyn, New York

Marital status of parents: mother unmarried at time of birth

Mother's occupation: clerk

Siblings: one brother, b.d. 1948

Onset of deafness: **birth** Etiology: Unknown

Other deafness in family: None

Educational and/or institutional background

Name	Dates attended
Day school for the deaf	9/62 - 6/64
Residential school for the deaf	9/64 - 6/66

I. Q. Test Scores (Wechsler equivalent)

Date of Test	Score
5/66	96
9/67	114
5/68	114

Psychological Evaluation

Subject #9 was referred for psychological evaluation by Mr. Robert Lennan, Supervising Teacher of the Pilot Project, as part of routine re-evaluation procedure for all Pilot Project participants.

Subject was first evaluated for the regular academic program at this school in March, 1964. It was noted during that evaluation period that Subject was an extremely active child but it was strongly felt that he was eligible to attend this school. At that time, Subject's mother explained that she was not married to Subject's father and didn't receive any support for him as a consequence. It is necessary for the mother to work in order to support Subject. There is an older child in the family, a 20 year old brother, who is presently in the Navy.

At the present time, Subject's mother is unmarried and uses her maiden name.

Subject was admitted to CSDR as a pupil in the regular Lower School program in September, 1964. He continued in that program until October, 1966, when he was transferred to the Pilot Project. In a dormitory report dated June, 1965 (9 months after his initial admittance to this school), the following observations were included:

> "Subject refuses to accept discipline or respect dormitory rules. He frequently has violent temper outbursts about minor things. He is hyperactive and shows little self-control. He seems to enjoy the other children, but finds it difficult to have a peaceful relationship."

On the academic report card which covered the same period of time, the following comments were included:

> "Subject has continued to make very good progress and to do good work in all his school subjects. However, there needs to be much more improvement in his school behavior. He still acts very immature when he is required to do something he does not want to do and on many occasions he has had severe temper tantrums. He is very careless about the care of his personal property, especially his hearing aid which has been sent innumerable times for repair. He has already lost ear molds and his hearing aid cord has had to be replaced because of his chewing it."

At the close of Subject's second year in the regular academic program at this school, the following remarks were included:

> "Subject wants all attention centered on him. He upsets the whole class to get attention. He seldom completes his homework or any assigned task on time. He sucks his fingers, plays, wastes time, distracts and bothers other children. He dislikes to obey and has little respect for others' feelings or for authority. He is accepting criticism a little better. He has fewer tantrums but is very sullen when reprimanded. He is often spiteful and inconsiderate of other children.
>
> His emotional problems affect the quality of his school work. There are very few days that Subject is stable enough to cooperate whole-heartedly and take part in the classroom activities."

In September, 1966, a home visit was made with the express purpose of discussing with his mother the possibility of transferring him to the Pilot Project program. Subject's mother reported at that time that she was at her wit's end trying to work and care for Subject who seemed to be the plague of the neighborhood. He was unable to get along with the children on his street and apparently took his frustrations out on flower pots and other inanimate objects. This had caused a great deal of anger among the neighbors. His mother states that she was working nights in order to be at home with the child during the day. She stated that she was quite interested in the Pilot Project program and that she was very interested in his quick return to this school. Her main concern seemed to be to rid herself of the Subject as quickly as possible.

Previous psychological evaluations on Subject yielded the following results:

Tests	Test Date	Results
Leiter Performance Scale	5-2-66	I.Q. 90
Raven's Progressive Matrices	5-2-66	75th Percentile
Leiter Performance Scale	9-19-67	I.Q. 112
Raven's Progressive Matrices	9-19-67	Percentile Rank 95

During the present evaluation period, the Leiter International Performance Scale was once again administered to Subject. During this testing period he earned an I.Q. of 112 which corresponds to a Wechsler Score of approximately 114 and falls near the 80th Percentile.

It was noted by this examiner that Subject's behavior and approach during the testing period had shown very little change over his behavior during the 1967 evaluation. He showed a definite lack of ability to concentrate without pressure and close supervision. He frequently said he was tired, he repeatedly got out of his seat, and each time he finished a test item he asked if he could leave. He was extremely careless in his responses and he tried to cry when he was told to apply himself. With pressure, however, he was able to correct countless errors in such short time that there was no question he had the ability.

The classroom and dormitory progress reports submitted at the end of Subject's second year in the Pilot Project indicate that although his temper tantrums are now very rare, he continues to demand attention and he becomes pouty or moody when disturbed by peers or adults.

It is the feeling of this examiner that although Subject #9 has made measurable progress both academically and socially during his two years as a participant in the Pilot Project, he continues to suffer from moderate to severe social and emotional maladjustment. It is extremely doubtful that he would successfully adjust to a regular classroom for normal deaf youngsters were he to be included in such a program during the coming year. He would fit best into a small group situation where his special adjustment needs can be taken into special consideration.

Neurological Examination

Date of Examination: January 13, 1967

HISTORY: This 7-year-old Negro boy had an essentially normal birth. He was the fourth child born at full term weighing 5 lb. 11 oz. No abnormality of the pregnancy, birth, or perinatal period was noted. This child has had no serious illnesses or injuries though he did have measles at three months. He was perhaps a little slow in developing, not sitting up until 11 months and not walking until 17 months. His dental development was somewhat slow, the first tooth appearing at 11 months. He has had no serious injuries or operations.

EXAMINATION - General - The patient is a fairly well-developed, fairly well-nourished Negro boy in no acute distress. He is somewhat hyperactive but quite cooperative. His general physical condition is good and no gross abnormalities are noted.

NEUROLOGICAL EXAMINATION: Examination of the cranial nerves including vision, visual fields, optic fundi, pupillary responses, etc. is essentially normal except for his hearing which is markedly decreased but not absent in both ears.

Examination of the motor system reveals no abnormality of station or gait. The patient has a good grip bilaterally. The deep reflexes are active and equal, cerebellar functions are intact. General sensation is intact throughout and there is no evidence of disease of the spinal cord or peripheral nerves.

IMPRESSION:
1. Moderately severe perceptive deafness bilaterally
2. No gross evidence of other involvement of the central nervous system

Hearing Loss

	125	250	500	1000	2000	4000	8000
R.E.	65	65	75	70	65	65	-
L.E.	70	65	75	85	80	75	-

Sample Case History cont'd
Subject #9

Reading and Achievement Test Scores

Gates Reading Tests

Date of Test	Word Recognition Grade Level	Sentence Reading Grade Level	Paragraph Reading Grade Level	Average
5/66	2.33	2.5	2.6	2.41
11/66	2.7	2.83	2.4	2.6
6/67	3.3	3.2	2.6	3.0
10/67	3.6	3.4	2.6	3.2
4/68	3.7	3.4	2.35	3.15

Stanford Achievement Tests

Date of Test	Word Recognition	Reading Paragraph Meaning	Vocabulary
11/66	1.5	1.6	1.2
6/67	2.2	1.7	1.2
6/68	2.7	1.7	1.4

Gray-Votaw-Rogers General Achievement Tests

Date of Test	Reading Voc.	Reading Comp.	Arithmetic Reas.	Arithmetic Comp.	Educational Grade
6/67	1.4	1.7	1.0	1.6	1.2
4/68	1.7	2.1	1.9	3.0	2.2

Graphic Presentation of Judge's Rankings

The distribution of anecdote ratings for Subject #9 given in Figure 15 shows a clearly defined positive slope. Within this overall change, this boy shows two separate rise trends, one the first year, the second during the final spring following marked deterioration in control in mid-winter. Although the general level of behavior is better in the last eight observations, much oscillation remains.

Graph Depicting Project Teacher's Evaluations of Behavior Change

The teacher's ratings of this Subject's behavior based on the Developmental Sequence of Educational Goals as shown in Figure 16 indicate that significant changes during the first year occurred on the readiness levels of attention and order in the mastery of intellectual

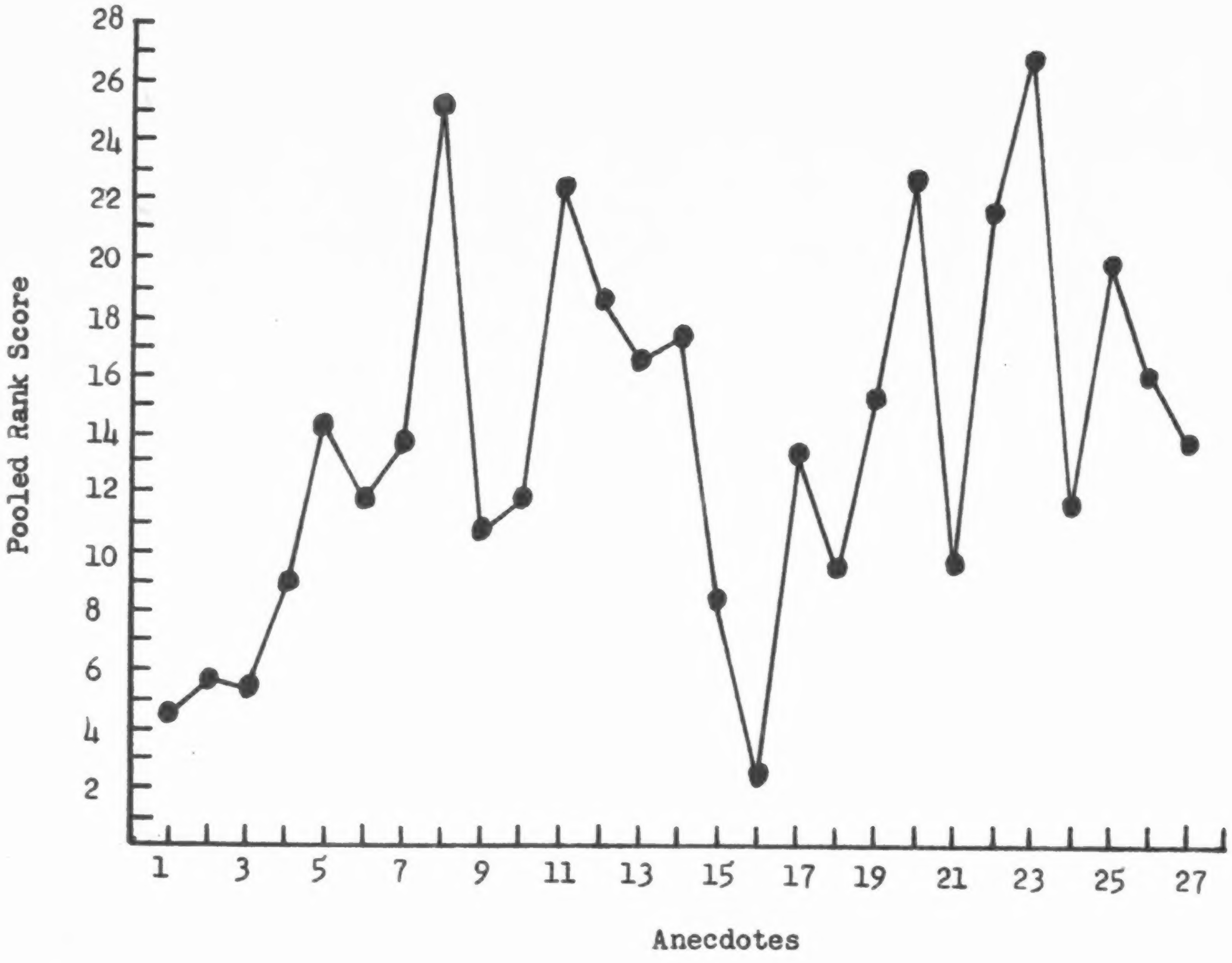


Figure 15. Distribution of ranks assigned to anecdotes. Subject No. 9.

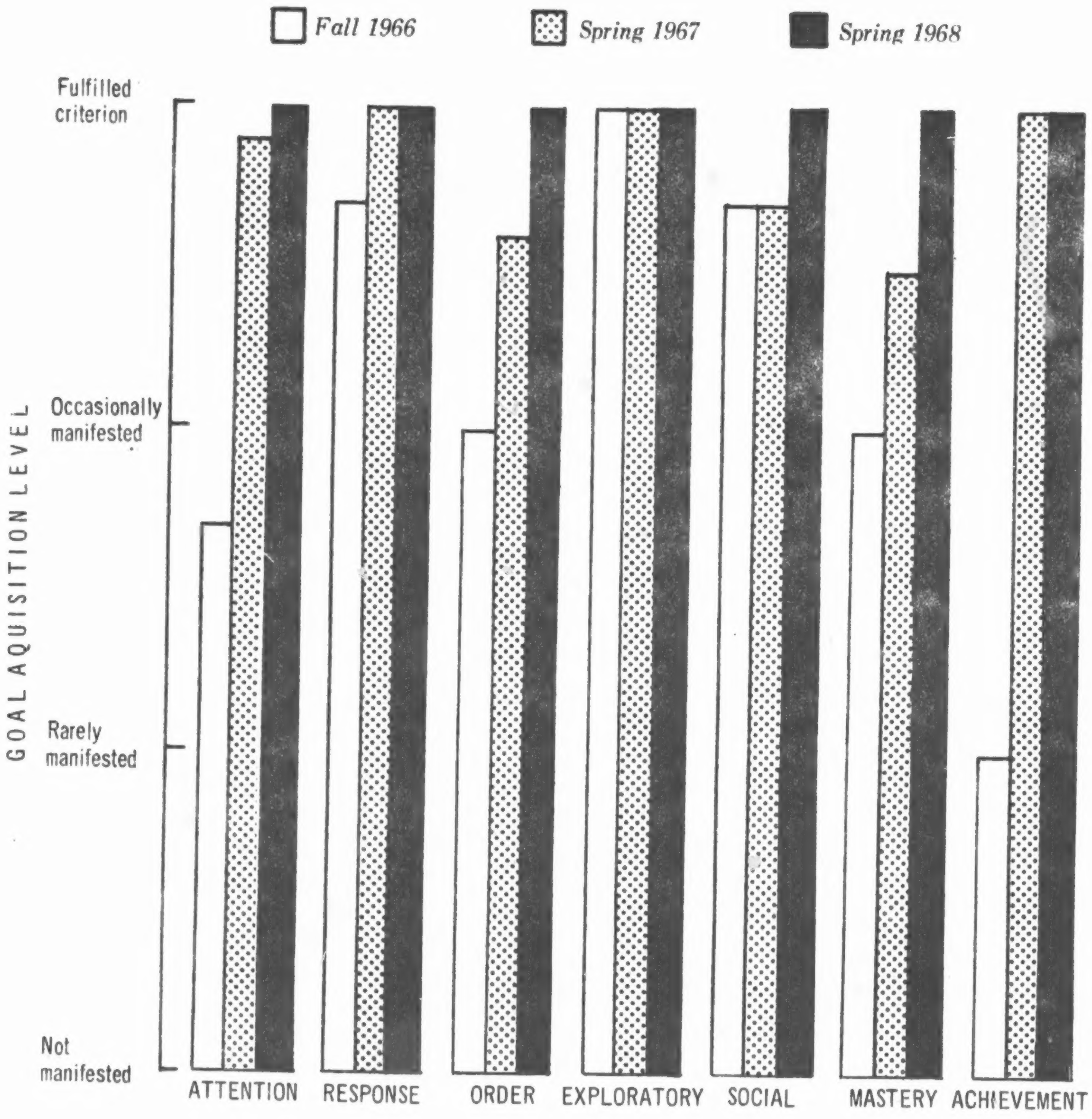


Figure 16. Comparisons of related gains in educational goals for Subject No. 9.

tasks and in the development of intrinsic motivation. Behavior was rated at optimal levels in all areas at the end of the second year.

Staff Ratings of Changes in Rapport With Adults and Peers

Staff members rated this subject as having made moderate improvement in his relationships with adults (mean rating 4.3) and peers (mean rating 4.4).

Entering Behavior

Subject's behavior was extremely hyperactive and aggressive. He teased and provoked his peers and often inflicted injury on them. He was a disruptive influence in the dormitory and classroom. He constantly sought to be the center of adult attention. He had frequent temper tantrums which often lasted for two hours during which he screamed, kicked, fought, and threw objects about the room. These were seen as another attention-getting device. In the classroom, his attention span was very short. He resisted beginning and completing assigned tasks and was extremely mobile. When reprimanded, he sucked his fingers.

Terminal Behavior

Relationships with peers had improved and he was able to function in group play activities. He was more cooperative and affectionate with adults. His rare temper tantrums were less violent and of shorter duration. In the classroom, his attention span increased; he was less mobile and less disruptive in group activities. He generally completed assigned tasks.

Current Status

Subject #9 is enrolled in a day school for the deaf in Los Angeles on a limited day schedule. His teacher reports that he is making satisfactory academic progress and has adjusted to the classroom routine. He is physically aggressive with other children in the classroom and on the playground. His mother has placed him in a foster home.

SAMPLE CASE HISTORY

Subject #10

Race: Mexican-Indian

Birthdate: 8/8/56 Place of birth: Albuquerque, N. M.

Marital status of parents: married

Father's occupation: foreman: citrus and avocado nursery

Mother's occupation: housewife

Siblings: None

Onset of deafness: birth Etiology: Prematurity

Other deafness in family: None

Educational and/or institutional background

Name	Dates attended
State Hospital for the Mentally Ill	61 - 66

I. Q. Test Scores (Wechsler Equivalent)

Date of Test	Score
5/61	unable to test
5/64	results not recorded (spuriously low)
2/66	72
9/66	82
9/67	90
5/68	88

Psychological Evaluation

Subject #10 was referred for psychological evaluation by Mr. Robert Lennan, Supervising Teacher of the Pilot Project, as part of routine re-evaluation procedure for all Pilot Project participants.

A brief summary of Subject's case history indicates he was born on an Indian reservation, the son of a laborer and a housewife. He is a premature child having weighed two pounds, 14 ounces. He has had some history of convulsions and walked at 28 months. Subject's parents, in trying to find help for their son, have seen a multitude of agencies and individuals, among them being the John Tracy Clinic for preschool deaf children, Pacific State Hospital, the California School for the Deaf, Crippled Children's Services, Camarillo State Hospital, Dr. Frank G. Wills, Child Psychiatrist, and many others. The diagnoses resulting from all of this have run the gamut and include deaf and mentally retarded, deaf and not mentally retarded, autistic, possibly without deafness, schizophrenic, deaf with emotional disturbance, and deaf with behavior secondary to deafness, not emotional disturbance.

Since 1961 and until 1966 when Subject was admitted to the Pilot Project, he had been a patient in the Children's Unit at Camarillo State Hospital where the original diagnosis for schizophrenia had been changed to "Childhood Adjustment to Severe Hearing Loss".

This is the fifth time within a four year period that an attempt has been made to administer the Leiter International Performance Scale to Subject. Results of previous psychological testing are as follows:

Test	Date	Results
Leiter Performance Scale	5-31-61	No score
Leiter Performance Scale	5-27-64	Results not recorded spuriously low
Leiter Performance Scale	2-9-66	I.Q. 62 (equals WISC I.Q. 72)
Leiter Performance Scale	9-13-66 (at home)	I.Q. 72 (equals WISC I.Q. 82)
Leiter Performance Scale	9-11-67	I.O. 83 (equals WISC I.Q. 90)
Raven's Matrices	9-11-67	60th Percentile

During the present evaluation period the Leiter International Scale was once again administered. Subject was extremely cooperative throughout the testing period and was very interested in the materials. It was noted by this examiner that Subject's approach to the test tasks was quite different during the present evaluation than it had been previously. During earlier testing he had shown a great deal of anxiety and appeared to be extremely unsure of himself. It was reported in earlier psychological reports that Subject was in constant need of approval during the testing situation and when approval was denied him his responses became erratic. He had seemed genuinely fearful of making final decisions in regard to the placement of blocks and that occasionally he had cried. During the present evaluation, however, it was repeatedly observed that Subject laughed aloud when he recognized the fact that he was unable to successfully complete a given task.

Throughout this testing period Subject attempted to communicate with the examiner through simple signs and gestures, most of these attempts were centered around the use of conventional signs for pictures of animals and objects found on the test materials.

It is the feeling of this examiner that Subject #10 has made remarkable improvement over the past year in spite of the fact that his psychological maladjustment is still regarded as severe. He continues to improve in his ability to follow directions and he shows increased organization in his thinking and he is able to relate to the world about him in a much more satisfactory manner. It is felt, however, that he will very likely always require special consideration in regard to his education and that special class placement will always be necessary. It is not unlikely that with continued adjustment Subject will be able to achieve higher test scores than those indicated above. It is doubtful, however, that he will ever function on an average level either academically or socially.

Neurological Examination

Date of examination: January 27, 1967

HISTORY: This boy was born at five months, weighing 2 lbs. 14 oz., probably the result of rather extensive bleeding which the mother had perhaps suggesting a premature separation of the placenta. He was kept in an incubator for three and a half months. His subsequent development was somewhat slow, he did not sit up until one year and did not walk until two years. He has never talked and it became obvious that he was also not hearing. He was somewhat hyperactive at first and quite a problem in the home apparently so that he eventually was sent to Camarillo State Hospital where he was for approximately four years, having been discharged in May of 1966. Prior to this and during this time the patient was examined by a large number of physicians and had many tests including psychological evaluations. It was even suggested that his difficulties were entirely on a functional basis and that he might not actually be deaf. However, the consensus of opinion apparently is that he does have bilateral congenital deafness of a severe nature. A diagnosis of childhood schizophrenia was made at one time but child maladjustment secondary to deafness was the final diagnosis. At the present time he is overweight but apparently has adjusted fairly well to his present surroundings.

EXAMINATION - General - The patient is a well-developed, fairly obese 10-year-old Mexican boy in no acute distress. He is alert and attempts to be cooperative but seems to have great difficulty

Sample Case History cont'd
Subject #10

in understanding what is desired of him. He becomes easily frustrated and cried on one occasion. No gross physical abnormality other than the overweight is noted.

NEUROLOGICAL EXAMINATION: Examination of the cranial nerves including vision, visual fields, optic fundi, pupillary responses, and extraocular movements is essentially normal though testing was difficult. The hearing, of course, is markedly decreased and, in fact, no definite evidence of response to any auditory stimulus was noted. His vision is somewhat poor with a rather severe myopia but he apparently is able to read and wrote his name in response to a written request, though it is possible that this is all that he can write.

Examination of the motor system reveals no serious abnormality of station or gait. He is left handed, his grip is good bilaterally. No gross weakness or paralysis was noted. The deep reflexes are hypoactive but equal, the plantar responses are normal. Cerebellar functions are intact.

Examination of the sensory system appears to be within normal limits.

IMPRESSION:
1. Deafness, bilateral, very severe
2. Probable mental retardation
3. Obesity

Hearing Loss

	125	250	500	1000	2000	4000	8000
R.E.		No Response					
L.E.				No Response			

Reading and Achievement Test Scores

Gates Reading Tests

Date of Test	Word Recognition Grade Level	Sentence Reading Grade Level	Paragraph Reading Grade Level	Average
11/66	1.45	--	--	--
6/67	2.0	2.17	1.55	1.9
10/67	2.37		1.7	1.3
4/68	2.37	2.6	2.2	2.39

Sample Case History cont'd
Subject #10

Reading and Achievement Test Scores

Stanford Achievement Tests

Date		Reading	
of Test	Word Recognition	Paragraph Meaning	Vocabulary
11/66	1.1		
6/67	1.4		
6/68	1.7		

Gray-Votaw-Rogers General Achievement Tests

Date	Reading		Arithmetic		Educational
of Test	Voc.	Comp.	Reas.	Comp.	Grade
4/67	1.3				
4/68	1.9	1.2	1.2	1.7	1.5

Graphic Presentation of Judges' Rankings

Figure 17, containing the anecdote plate for Subject #10 shows two characteristics we would desire for each subject. First, there is a moderate though clearly positive slope through the total array. Second, the damping of oscillation implies an increasingly stable as well as improved behavior. This seems to be the only subject who is not reacting to the immanent close of the program with either diminished quality or more variability in behavior.

Graph Depicting Project Teacher's Evaluations of Behavior Change

The teacher's ratings of this subject's behavior based on the Developmental Sequence of Educational Goals as shown in Figure 18 indicate that the greatest changes in the first year occurred on all of the readiness levels, particularly in social behavior and in the mastery of academic skills. Behavior ratings at the end of the second year indicate near optimal functioning in terms of this child's level of ability with some drop off at the response level.

Staff Ratings of Changes in Rapport with Adults and Peers

Staff members rated this subject as having made marked improvement in his relationships with adults (mean rating 4.9) and moderate improvement in his relationships with peers (mean rating 4.4).

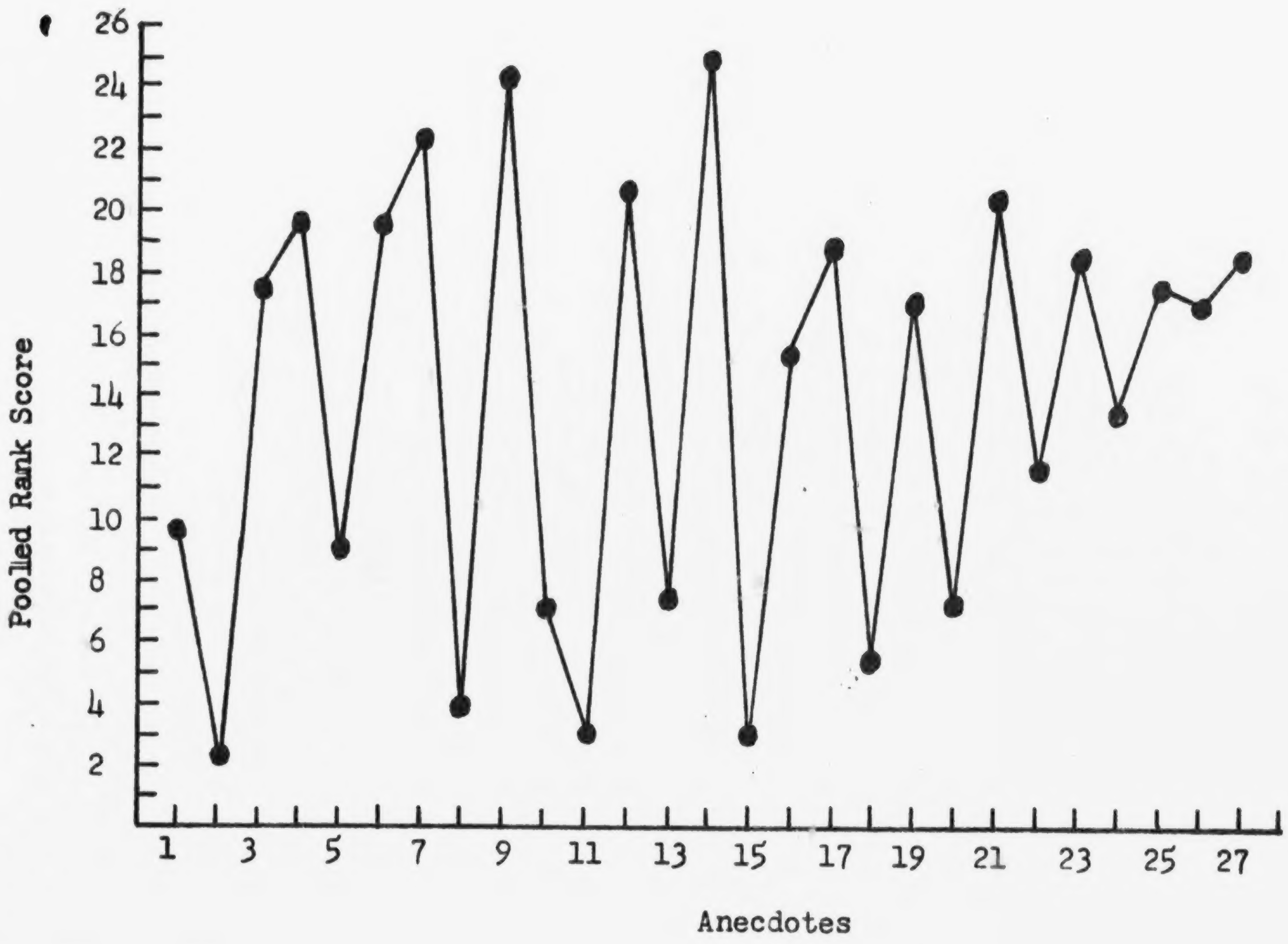


Figure 17. Distribution of ranks assigned to anecdotes. Subject No. 10.

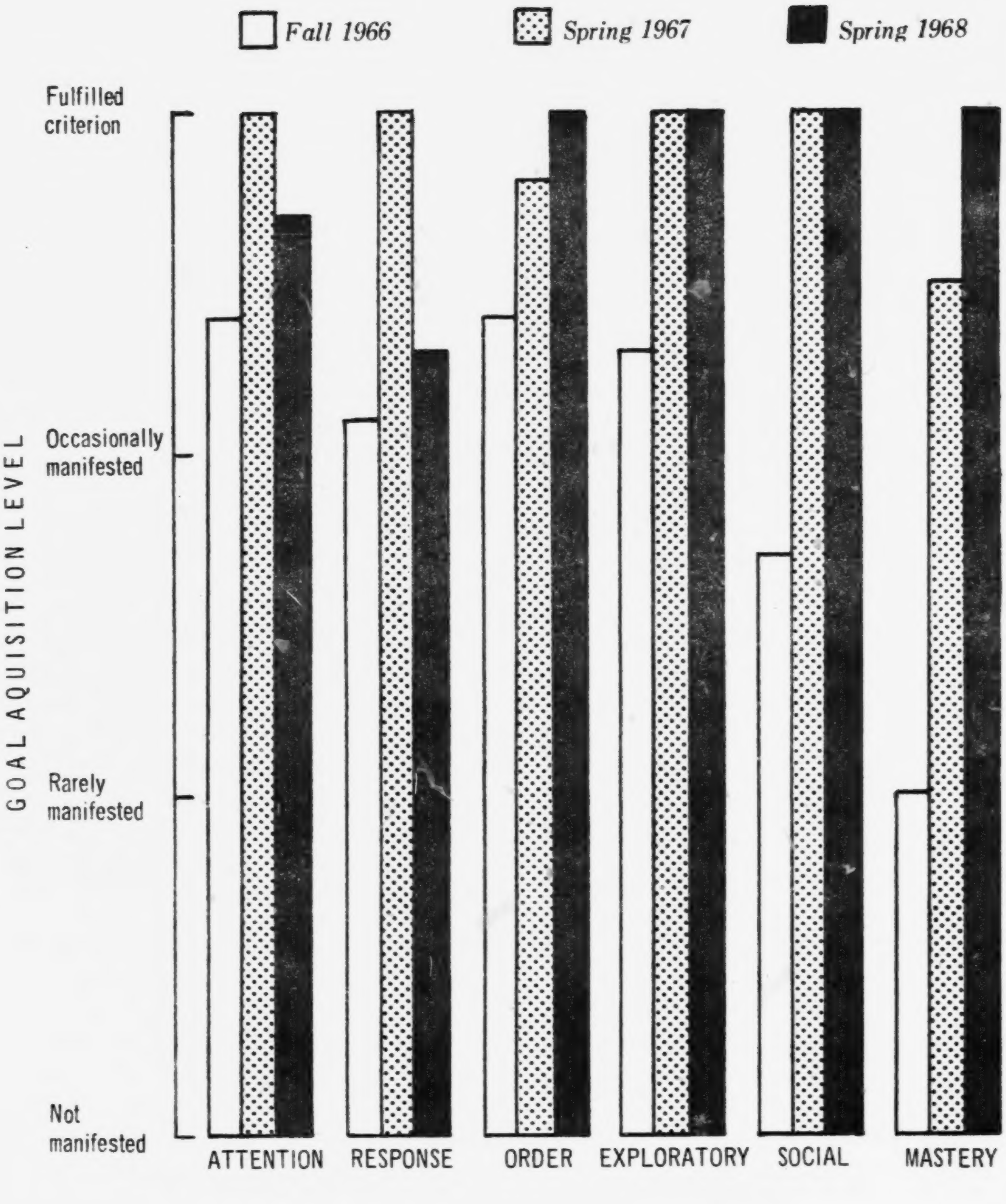


Figure 18. Comparisons of related gains in educational goals for Subject No. 10.

Sample Case History cont'd
Subject #10

Entering Behavior

Subject was highly dependent on adults and sought their protection in group situations which he perceived as threatening. He was very lethargic in moving from one place to another and had to be lead by the hand. Changes in routine were very upsetting to him and resulted in temper tantrums in the course of which he would cry, scream, grind his teeth, kick, pound his chest or head with his fist or some object and occasionally break his glasses. He had an obsession for drawing cars, trucks, and campers and would revert to doing this if not kept occupied with other activities. In his relationship with his parents he was very demanding and exerted a controlling influence in their daily routine at home. Each Sunday when he returned to school he cried and had tantrums before leaving home and when he was returned to the dormitory. Communication was generally limited to indicating his needs by pulling an adult to the desired object and pointing to it. Subject was extremely fearful of his peers. This was felt to be due to his former placement on a ward with aggressive psychotic children in a state hospital prior to his enrollment in the project. He did not enter into group activities but would observe cautiously from a safe distance.

Terminal Behavior

Subject was relaxed and happy in both his school and dormitory environments. He had developed an avid curiosity about the world around him and often asked staff members for the names of unfamiliar people or objects. He was affectionate and sought physical contact with adults and initiated communication with them using the basic repetoire of signs which he had learned. He no longer had to be prodded along or lead by the hand but often lead the way or independently initiated activities. His tantrums were infrequent and of shorter duration. He understood and responded to the checkcard system. He was less demanding of his parents and exhibited pleasure in returning to school on Sunday afternoons.

Subject was beginning to communicate and seek physical contact with peers. He established good rapport with one boy in particular and enjoyed playful teasing by the other children.

Current Status

Subject #10 is enrolled on a minimum day schedule in a class with trainable mentally retarded children who have normal hearing.

SAMPLE CASE HISTORY

Subject #12

Race: White

Birthdate: 6/15/59 Place of birth: Edmonton, Alberta, Canada

Marital status of parents: married

Father's occupation: watch repairman

Mother's occupation: housewife

Siblings: one brother, b. d. 1956; one sister, b.d. 1961

Onset of deafness: birth Etiology: Prenatal influence

Other deafness in family: none

Educational and/or institutional background

Name	Dates attended
Preschool Parent Institute	June 15 - 19, 1964

I. Q. Test scores (Wechsler equivalent)

Date of Test	Score
10/66	Unable to test due to emotional distress
9/67	107
4/68	95

Psychological Evaluation

Subject #12 was referred for psychological evaluation by Mr. Robert Lennan, Supervising Teacher of the Pilot Project, as part of routine re-evaluation procedure for all Pilot Project participants.

Subject is the second eldest of three children of a Polish jeweler and his Canadian wife. The father became a naturalized citizen of Canada 11 years ago and settled with his wife in Edmonton, Alberta, where Subject was born two years later. The family moved to the Southern California area when he was three years old.

The mother reports that Subject is the only deaf member on either side of the family. His deafness was first noted at the age of six months. It is believed by the parents that he was born deaf. Background information provided by the mother indicates a slight maturational lag in his over-all development. He began walking at 17 months and began feeding himself at 3 1/2 years.

During the week of June 15 - 19, 1964, Subject and his mother took part in a Nursery School-Parent Institute at this school. This was his first "school" experience. The Pupil Evaluation submitted by the teacher at the conclusion of that program indicated that his behavior was extremely erratic. He became upset at the slightest provocation and reacted by throwing himself on the floor, screaming, dropping his pants, and/or striking out at any object close at hand. He remained quiet only as long as he was given complete freedom of movement and as long as he had his own way. However, even during these quieter periods, he remained withdrawn from the group and required constant supervision.

Subject was first seen by this examiner in September, 1964. An excerpt from the report on that evaluation period is as follows:

> "During the present evaluation, Subject's behavior was obviously that of an emotionally disturbed child. An attempt was made to administer the Leiter International Performance Scale, but he responded by violently dumping the test materials on the floor, tearing at the blinds, screaming, and attempting to upset the furniture. During the cessations which did occur, he became engrossed in the voluntary twitching of his right index finger and in the sucking in of air between his teeth. He rejected all attempts of the psychologist to establish rapport. Eye-to-eye contact was not achieved."

In October, 1966, Subject was first admitted to the Pilot Project Program. Because of his behavior problems and inability to relate to another individual, an attempt to test him was not made until September, 1967, after he had been enrolled in the Pilot Project for a period of one year. During that evaluation period Subject showed a great deal of interest in the test activity and responded well as long as operant conditioning techniques were used. He was pleased with his successes, praised himself by clapping, and he frequently asked for his reward. Eye contact was frequent but hesitant. It was noted that he was able to concentrate on a particular activity for several minutes and was able to make corrections. There were no indications of the bizarre behavior noticed during the initial evaluation attempt made in 1964. During this second evaluation period the Leiter International Performance Scale was successfully administered. The I.Q. of 103 which Subject earned corresponded to a Wechsler I.Q. of about 107 and reflected at least High Average intellectual potential.

Also during the 1967 evaluation period the Human Figure Drawings were successfully produced. The drawings were primitive and reflected a withdrawn, fearful child who has extreme difficulty relating to the environment. An unsuccessful attempt was made to administer the Raven's Matrices. It appeared at that time as though Subject did not understand the directions. He wanted to do the tasks alone but did not know how. He could not relate to the examiner well enough or long enough so that the procedure could be demonstrated.

During the present evaluation period the Leiter International Performance Scale was once again administered to Subject. It was noted that during the present testing period that he was quite compulsive and would not make corrections although he indicated that he knew where corrections were necessary. He showed poor awareness of detail but when scolded he was able to accomplish the tasks much more successfully. The I.Q. of 90 which he earned during this testing period corresponds to a Wechsler score of 95 and falls within the Average Range of intelligence.

Although it is evidenced that Subject has made remarkable progress in his overall adjustment, it is felt by this examiner that he still is far from ready to be enrolled in a regular classroom situation for normal deaf children. In order for Subject to make continued progress, it would be necessary for him to continue in a special class placement where his adjustment and learning problems can receive constant individual attention.

Neurological Examination

Date of examination: January 20, 1967

HISTORY: This boy was born after a somewhat stormy pregnancy in which the mother was believed to have had some toxemia. She also had influenza in the first trimester and some bleeding in the third trimester. She had many headaches through the pregnancy and the blood pressure was high most of the time. No Rh problem was expected since both the mother and father were Rh positive. The patient was the second child, was born after about two hours labor. It is not known whether he breathed immediately or not but he was not said to have been blue. He weighed 5 lbs. 7 oz. and was 20 in. in length. He remained in the hospital about one week after the mother went home for gavage feedings. He was very jaundiced, however, except for being a feeding problem his early development was essentially normal, although he did not walk until he was about 16 1/2 months of age. He has had no serious illnesses or injuries. He has been examined rather extensively at the Edmonton General Hospital when he was 17 months old. His speech has been very retarded and he has been somewhat of a behavior problem, being somewhat hyperactive much of the time. Hearing loss was suspected when he was about one year of age and confirmed by an examination when he was 14 months of age.

NOTE: This boy has had rather extensive examinations in the past in an attempt to determine whether his language difficulties are on the basis of deafness or on the basis of primary language involvement. Both extremes have been favored at different times in the past, but it seems likely that some intermediate situation exists with some actual involvement of hearing acuity coupled with a definite dysphasia.

EXAMINATION - General - The patient is a well-developed, well-nourished 7-year-old boy in no acute distress but obviously anxious. He is rosy cheeked and alert but quite uncooperative. However, he frequently will cooperate when a procedure is tried the second time or when he sees the same done on another child. His general physical condition seems good and no gross abnormalities are noted. His nails are bitten quite short.

NEUROLOGICAL EXAMINATION: Examination of the cranial nerves including vision, visual fields, optic fundi, pupillary responses, and extraocular movements seems to be normal though poor cooperation makes it difficult to tell for certain.

Examination of the motor system - He appears to be right handed and no abnormality of station or gait is noted. No gross weakness or paralysis is noted. Coordination is good, the deep reflexes are active and equal and no pathological ones are elicited. General sensation is difficult to test but seems to be intact. The patient's hearing seemed to be impaired but his poor cooperation made it difficult to know whether he heard any or not.

IMPRESSION: Chronic brain syndrome with some aphasia and probably some deafness, secondary to prenatal or neonatal damage, this child having been very jaundiced at birth.

Hearing Loss

	125	250	500	1000	2000	4000	8000
R.E.	70	75	85	95	-		
L.E.	70	70	80	95	-		

Sample Case History cont'd
Subject #12

Reading and Achievement Test Scores

Gates Reading Tests

Date of Test	Word Recognition Grade Level	Sentence Reading Grade Level	Paragraph Reading Grade Level	Average
11/66	0	--	--	--
6/67	1.8	1.4	--	1.6
10/67	1.5	--	1.4	1.45
4/68	1.8	2.33	1.6	1.91

Stanford Achievement Tests

Date of Test	Word Recognition	Reading Paragraph Meaning	Vocabulary
11/66	No Test		
6/67	1.4		
6/68	1.7		

Gray-Votaw-Rogers General Achievement Tests

Date	Reading		Arithmetic		Educational
of Test	Voc.	Comp.	Reas.	Comp.	Grade
6/67	0	1.0	-	-	-
6/68	1.4	1.6	1.2	1.4	1.4

Graphic Presentation of Judges' Ranking

Subject #12 whose anecdote data is plotted in Figure 19 showed the most severe behavior symptom pattern of the starting group. The self and group disruptive behavior included hyperactivity, screaming, and clothes tearing. Outbursts were followed by periods of inaction and nonattentive behavior. What this graph shows is that his behavior markedly stabilized in the second year. He was in fact working fairly regularly at his seat. The judging teachers with their typical regard for quiet tended to rank high (favorable) episodes in the early months when the staff in fact regarded these periods as being sulleness or asocial and nonproductive.

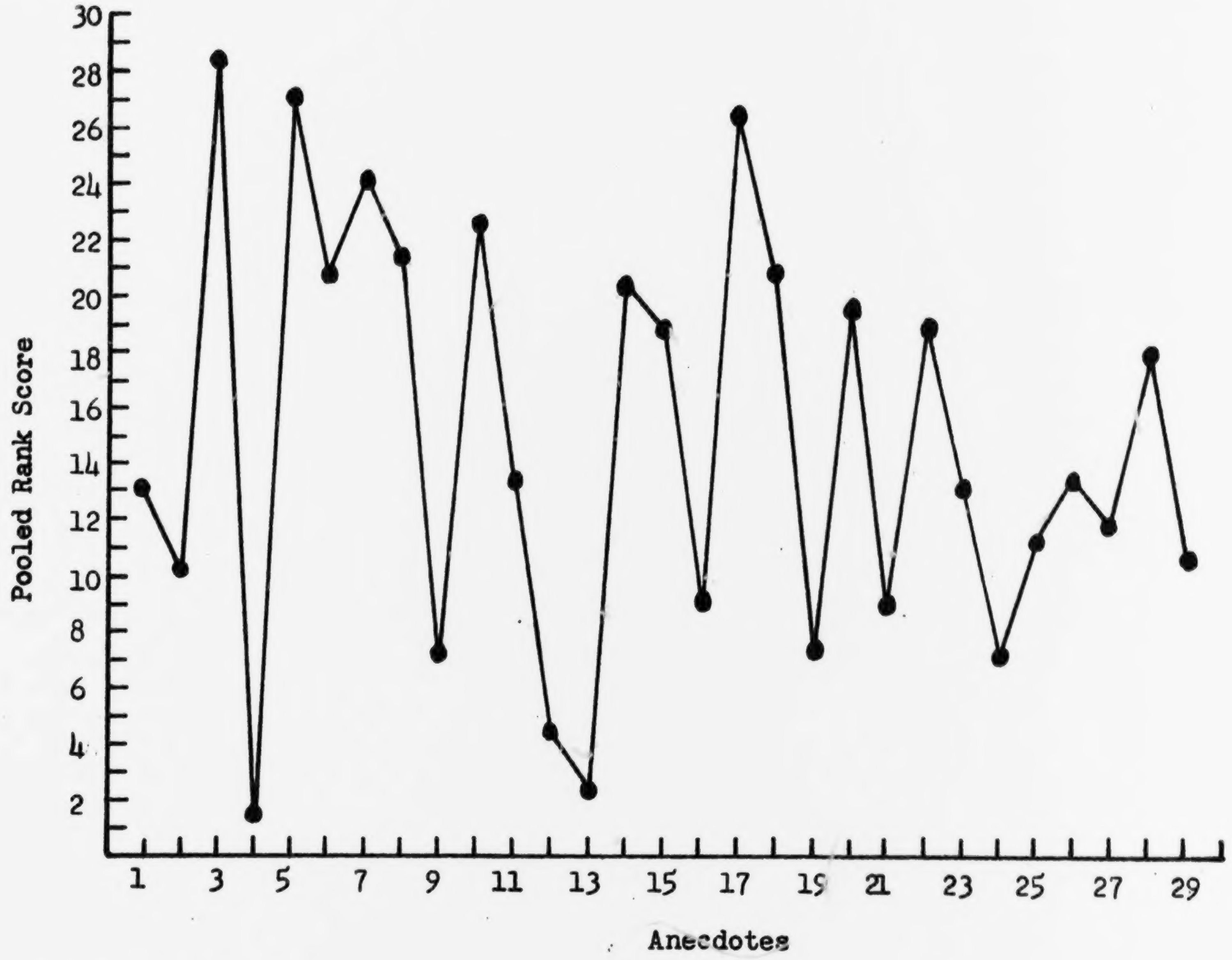


Figure 19. Distribution of ranks assigned to anecdotes. Subject No. 12.

Sample Case History cont'd
Subject #12

Graph Depicting Project Teacher's Evaluations of Behavior Change

The teacher's ratings of this subject's behavior based on the Developmental Sequence of Educational Goals as shown in Figure 20 indicate that marked positive change occurred during the first year on all of the readiness levels and at the mastery level. Behavior ratings at the end of the second year indicate near optimal functioning in all areas in terms of this child's level of ability.

Staff Ratings of Changes in Rapport with Adults and Peers

Staff members rated this subject as having made marked improvement in his relationship with adults (mean rating 4.7) and moderate improvement in his relationships with peers (mean rating 4.3).

Entering Behavior

Subject was extremely hyperactive and withdrawn. He had little or no eye contact and did not relate with adults. He had frequent temper tantrums in the course of which he destroyed his clothing, furniture and other equipment. Much of his time was spent in staring at his hand (which he held in front of his face in a stiff "Y" position) and screaming. He marked furniture, clothing, etc. with chalk, pens, pencils, and his saliva. Subject often stared at the flourescent lights in the classroom and this distracted him from assigned tasks. He was unable to tolerate lines on paper, dividers or edges of chalkboards, edges of desks, tables, or any other tangible limit in his environment.

Subject avoided all social contact with peers and any attempt by other children to initiate contact was met by screaming and immediate withdrawal.

Terminal Behavior

The checkcard system was effective in modifying the subject's behavior to the extent that his tantrums were much less frequent and diminished in their intensity. As his ability to communicate increased, he responded to reasoning and praise. He seldom stared at lights. He completed assigned tasks and showed an interest in learning. He developed a close relationship with another child in the project and was able to participate in group activities.

Current Status

Subject #12 is enrolled in a private school for multi-handicapped children and is reported to have made a satisfactory adjustment.

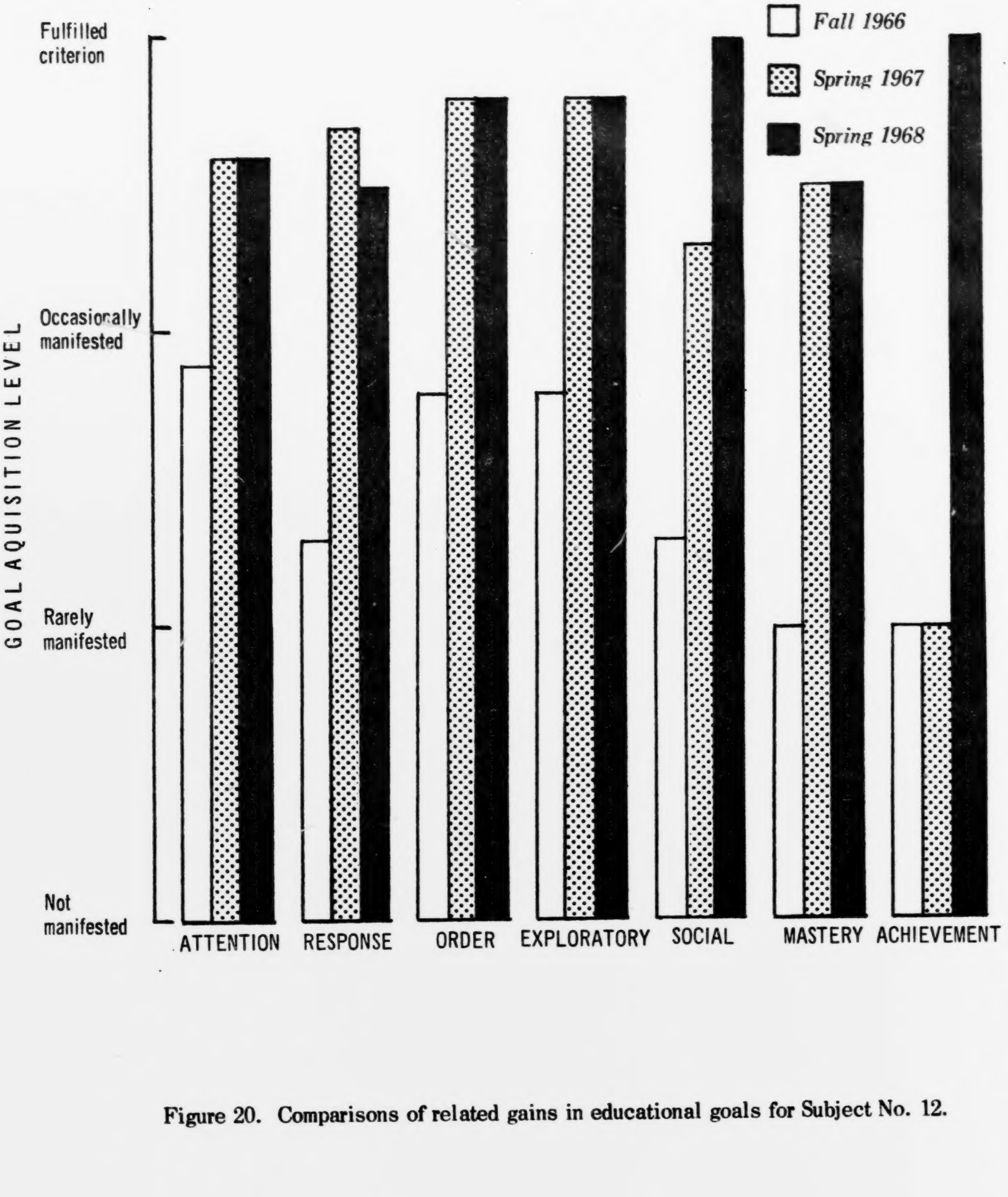


Figure 20. Comparisons of related gains in educational goals for Subject No. 12.

SAMPLE CASE HISTORY

Subject #14

Race: Negro

Birthdate: 9-14-58 Place of birth: Los Angeles, CA

Marital status of parents: Divorced

Father's occupation: mail clerk

Mother's occupation: housewife

Siblings: none

Onset of deafness: unknown Etiology: unknown

Other deafness in family: none

Educational and/or institutional background

Name	Dates attended
Day class for the deaf	9/65 - 10/66

I. Q. Test scores (Wechsler equivalent)

Date of Test	Score
9/66	89
6/68	93

Psychological Evaluation

Subject #14 was referred for psychological evaluation by Mr. Robert Lennan, Supervising Teacher of the Pilot Project as part of routine evaluation procedure for all Pilot Project participants.

Subject is the only child of divorced parents. He resides with his mother who is employed as a nurse. There are no other deaf members of the family. He had attended classes at the Mary E. Bennett School and the Hyde Park School in Los Angeles before his enrollment in the Pilot Project in October, 1966.

Subject was first evaluated by this examiner at the Hyde Park School in September, 1966 to aid in determining his eligibility for enrollment in the Pilot Project. At that time the Leiter Performance Scale was administered and he earned an I.Q. of 81 which corresponds to a Wechsler I.Q. of about 89 and reflected Dull Normal to Low Average intellectual potential. It was noted during that evaluation period that Subject was quite passive and he made few attempts to make corrections or changes. He seemed to be a reluctant participant.

In talking to Subject's teacher at the Hyde Park School, it was brought out that he became quite aggressive, particularly in his social interactions. It was because of his aggressiveness and his lack of academic growth that he was referred to this school for consideration as a possible participant in the Pilot Project.

Progress reports from both the dormitory and classroom areas made in May, 1968, indicate that over the two years of his enrollment in the Pilot Project he made significant progress in his social adjustment. It was felt at the end of the two year period that his problems now are more academic than behavioral in nature. It was noted that after two years of being included in the Pilot Project he has made only slight improvement academically. He has a much better attitude toward school now and he is a good pupil. He follows all classroom rules, but he has fallen behind academically. At times he can do better work than at other times but this happens very rarely. According to the classroom teacher, he becomes panicky when he has to do his own thinking especially when he is given an achievement test.

During the present evaluation period the Leiter International Performance Scale was once again administered. On this test he earned an I.Q. of 87 which corresponds to a Wechsler score of approximately 93 and reflects Low Average intellectual functioning. It was noted during this testing period that Subject displayed a lack of organization in his thinking and was unable or unwilling to make decisions on his own. He was extremely slow in his responses.

In summary, Subject #14 is a child of at least Low Average intellectual potential who over the two years of his enrollment within the Pilot Project has made considerable gain in his overall adjustment but has made little progress academically. It is the feeling of this examiner that Subject might fit well into a small special class placement for children with learning problems but it is unlikely that he will ever function academically on an average level.

Neurological Examination

Date of examination: January 27, 1967

HISTORY: Essentially no past history is available on this child. The delivery was said to have been normal at full term. He was born in a hospital. No abnormality of the pregnancy or birth was noted on the record. He is said to have congenital deafness and under physical defects cerebral palsy is listed. No further details substantiating the cerebral palsy is noted.

Sample Case History cont'd
Subject #14

EXAMINATION - General - The patient is a well-developed, well-nourished 8-year-old Negro boy in no acute distress. He is alert, cooperative, and oriented. His general physical condition is good and no gross abnormalities are noted.

NEUROLOGICAL EXAMINATION: Examination of the cranial nerves including vision, visual fields, optic fundi, pupillary responses, and extraocular movements is essentially normal. The hearing is markedly decreased bilaterally but some hearing does persist, slightly more on the left than on the right and with the stethoscope he responds readily to signals tapped on the diaphragm.

Examination of the motor system reveals the patient to be right handed; there is no abnormality of station or gait. His grip is good bilaterally. No gross weakness or paralysis is noted. Cerebellar functions are intact. The deep reflexes are active and equal and no pathological ones are elicited.

Examination of the sensory system reveals no obvious abnormality.

IMPRESSION:
1. Deafness, bilateral, severe, slightly greater on the right than on the left, cause undetermined.
2. No other evidence of organic disease of the nervous system.

Hearing Loss

	125	250	500	1000	2000	4000	8000
R.E.	-	-	95	-			
L.E.	50	50	70	100	90	-	

Reading and Achievement Test Scores

Gates Reading Tests

Date of Test	Word Recognition Grade Level	Sentence Reading Grade Level	Paragraph Reading Grade Level	Average
11/66	0	-	-	-
10/67	1.4	-	1.45	1.42
4/68	1.8	2.17	1.6	1.86

Sample Case History cont'd
Subject #14

Reading and Achievement Test Scores

Stanford Achievement Tests

Date of Test	Word Recognition	Reading Paragraph Meaning	Vocabulary
11/66	1.3		
6/67	No Test		
6/68	1.1		

Graphic Presentation of Judge's Rankings

Subject #14, because of a poor attendance record, has the fewest anecdotes of any of the two year subjects. Only fourteen observations are available. Their ranks are plotted in Figure 21. Because his absences tended to coincide with observers schedules for his room, we have only three anecdotes of his first year, one in the early winter and two in the spring. It would appear from the points available that Subject #14 did make overall improvement within the usual oscillation.

Graph Depicting Project Teacher's Evaluations of Behavior Change

The teacher's ratings of this subject's behavior based on the Developmental Sequence of Educational Goals as shown in Figure 22 indicate that minimal changes occurred on the readiness and mastery levels during the first year and that this trend continued during the second year particularly on the achievement level.

Staff Ratings of Changes in Rapport With Adults and Peers

Staff members rated this subject as having made moderate improvement in his relationships with adults (mean rating 4.2) and peers (mean rating 4.2).

Entering Behavior

Subject was very quiet and withdrawn. He was fearful of failure and stubbornly resisted undertaking assigned tasks. He was affectionate with adults, but often displayed covert, aggressive behavior with peers. He was frequently observed subtly teasing, hitting or pinching other children. At times, he would fight openly but would become very upset if his opponent retaliated. He was fastidious in caring for his clothing and personal belongings. Much of his time in the classroom was spent in daydreaming, rocking back and forth in his chair,

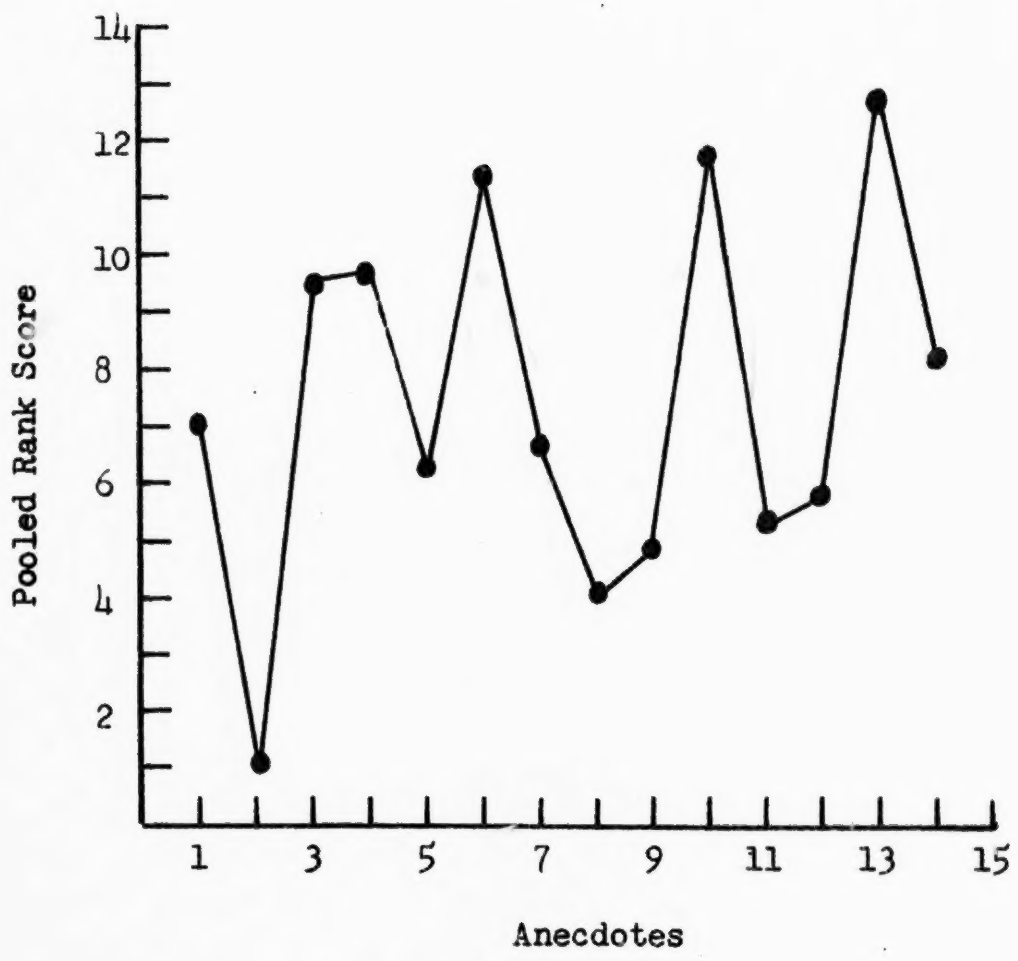


Figure 21. Distribution of ranks assigned to anecdotes.

Subject No. 14.

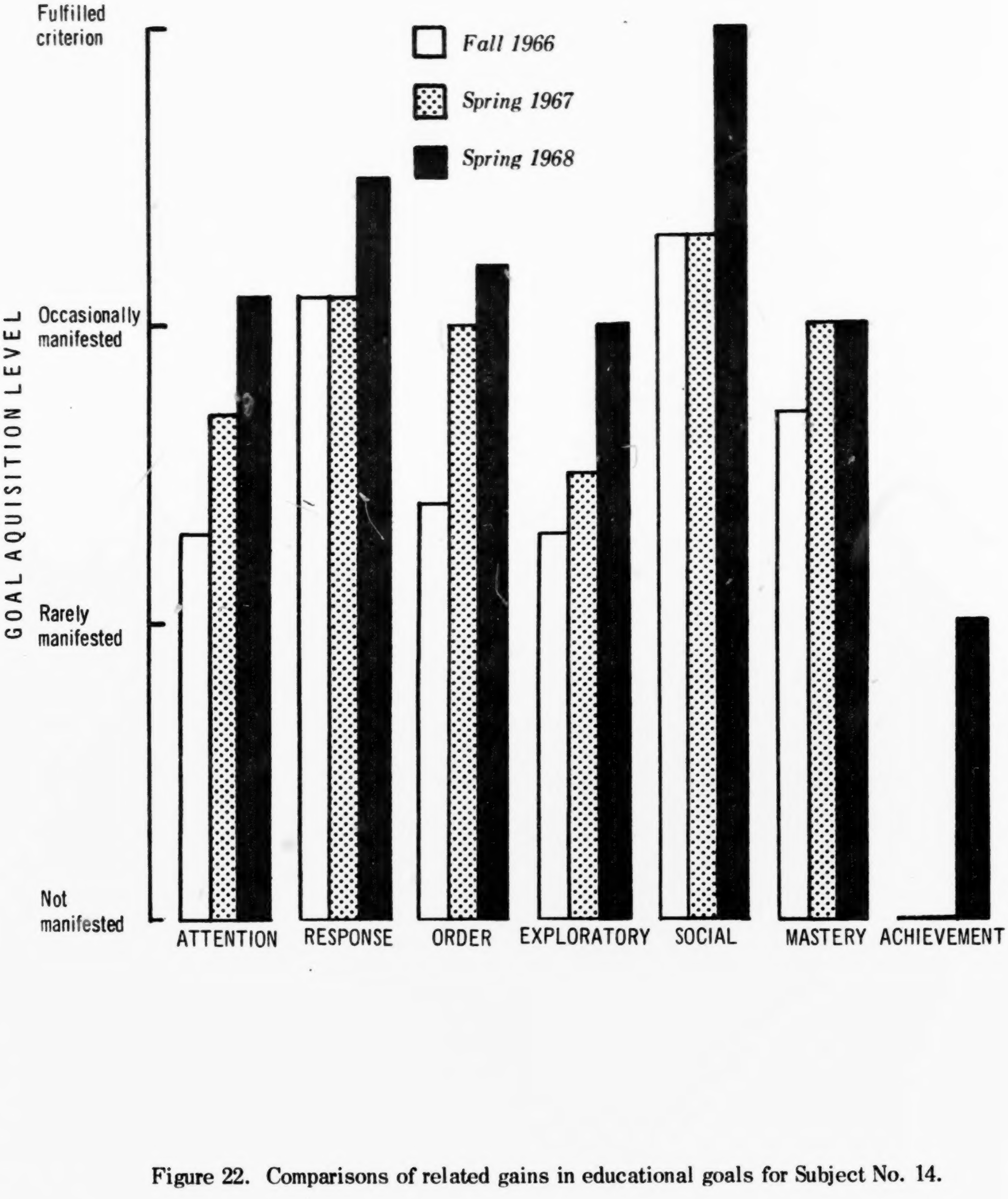


Figure 22. Comparisons of related gains in educational goals for Subject No. 14.

and cupping his hand over his ear as he made high pitched vocalizations.

Terminal Behavior

Subject had established good rapport with adults. He seemed happy in the school environment and would generally complete assigned tasks. Since he was productively occupied most of the time, his daydreaming and other withdrawal activities diminished almost completely. His aggressive behavior with other children was reduced considerably.

Current Status

Subject #14 is enrolled in a day school for the deaf in Los Angeles. He has adjusted to the classroom routine, but is making minimal academic progress.

SAMPLE CASE HISTORY

Subject #16

Race: White

Birthdate: 6/26/54 Place of Birth: San Bernardino, CA

Marital status of parents: married

Father's occupation: shoe repairman

Mother's occupation: housewife

Siblings: one sister, b.d. 1950; one brother, b.d. 1957

Onset of deafness: 7 1/2 months Etiology: Meningitis

Other deafness in family: none

Educational and/or institutional background

Name	Dates attended
Residential school for the deaf	9/59 - 10/66

I. Q. Test scores (Wechsler equivalent)

Date of Test	Score
5/60	84
1/62	96
6/68	91

Psychological Evaluation

Subject #16 was referred for psychological evaluation by Mr. Robert Lennan, Supervising Teacher of the Pilot Project, as part of routine re-evaluation procedure for all Pilot Project participants.

Subject is one of three children of a shoe repairman, was deafened at seven and one half months by meningitis and has been in this school since September, 1959. Though he has not been a "severe" discipline problem, reports indicate things such as "withdrawal", "coldness", "aggressiveness", "egocentricity", "immaturity", and poor physical health.

When Subject was first brought to this school for evaluation at age two years, 11 months, he was described as a youngster who wore diapers and was otherwise very immature for his age. The impressions of the examiner were that he was possibly retarded. The first indications of inadequate emotional and social development were alluded to a psychological evaluation dated 5-17-60 made at this school when he was five and a half years of age. It was the feeling of the examiner that although Subject earned an I.Q. score within the Dull Normal range of intelligence, his performance was adversely affected by gross impulsiveness and that his intellectual level was actually well within the Average range. Included in the report was the following comment:

> "Subject is quite independent emotionally, but he seems to have coldness and detachment, rare for such a young child. His personality suggests he needs more association with his father or some other adult male who would relate to him in a friendly manner. It would be interesting to see if the father rejects the boy or if the mother is overprotective."

Subsequent testing (1-31-62) supported the initial opinion that Subject is of at least Average intellectual ability.

When Subject was first enrolled in the regular academic program at this school in September, 1959, he was admitted as a residential pupil. Dormitory reports covering the five-year period during which he was residential pupil indicate that he was a very nervous, immature youngster who was extremely stubborn and had difficulty learning to care for his own needs. He reacted to directions by either ignoring the authority figure or by screaming and crying, and it was reported that hair pulling, biting, scratching, kicking, throwing sand or otherwise intentionally hurting other children were a common part of his group play behavior.

This child's case history indicates that he always pursued almost compulsively his desire to have his own way and to not have to do things for himself. Overprotection and overindulgence on the part of the parents had frequently been mentioned as a possible cause.

Even after Subject became a day pupil (1964-66) there was little noticeable change in his overall behavior either within the structured environment of the classroom or in informal group activities. Academic achievement grades consistently hovered near the "D" level. It was felt that his low level of achievement has been caused for the most part by poor emotional and social adjustment, but his poor attendance at this school has undoubtedly been a contributing factor also. Case file information indicates it has not been uncommon for him to miss as many as 20 to 40 days of school in one school year. For the most part these illnesses commenced either at school or just prior to his returning to school and usually consisted of earaches, high temperatures, vomiting or stomach cramps. The parents indicated that he was rarely sick on weekends, and summer vacations usually pass without a complaint.

The mother reports that he has been on and off of medication for "stomach convulsions".

A year end evaluation regarding Subject's social development submitted by his classroom teacher (June, 1966) while he was still included in the regular program at this school is as follows:

> "Physically Subject is not healthy. He is often absent because of illness and/or keeping doctors' appointments. He rebels against physical exercise and he is often languid in the classroom. If left alone he will frequently fall asleep.
>
> Academically Subject has much potential, but he makes a minimum use of it for constructive purposes. He is lazy and often refuses to write an assignment. Sometimes he will rush through an assignment, writing anything in order to finish it. On rare occasions he will put good effort into his work and produce good results.
>
> Socially he has no friends. He is a selfish, self-centered child who can't see beyond himself. He purposely bothers other children and antagonizes to gain attention. He has been praised for good conduct on the rare occasions that he has shown it, but he doesn't seem impressed with this kind of praise and promptly reverts to undesirable behavior. He will often shriek at the top of his voice during class to gain attention."

Just prior to Subject's admittance into the Pilot Project in October, 1966, the mother indicated that the situation in the home was growing steadily worse and was rapidly approaching an intolerable level. In an effort to find relief from the overwhelming problems which he presented to her, the mother had sought added help not only from the school but from the California Baptist College and from the Family Service Agency in San Bernardino. In light of the situation which prevailed at that time, there was little doubt that Subject's family, especially the Subject, was desperately in need of the outside help which she sought.

During the latter part of Subject's second year in the Pilot Project Program, an attempt was made to integrate him back into the regular Junior High School academic program. Academic progress reports submitted by the Junior High School teacher at the end of the 1967-68 school year indicated that he continued to have difficulty getting along with other children, but was apparently making a sincere effort to try to improve his relationships with his peers. The progress reports submitted by the Pilot Project covering the same period of time included the following comment in regard to Subject's overall behavior:

"Subject continues to have major problems getting along with his peers. His previous problem of continually 'coughing' has subsided considerably. He now teases the others by making faces, telling them inane things to rile them, and pestering them by taking their things. He cannot interact with peers on a mature level for extended periods."

During the present evaluation period the Leiter International Performance Scale was administered to Subject. On this test he earned an I.Q. of 84 which corresponds to a Wechsler score of approximately 91 and reflects Low Average intellectual functioning. It was noted that on several of the subtests where Subject made errors he had come very close to completing the tasks successfully. Throughout the examination period he had a tendency to want to visit and monopolize the conversation.

In summary, Subject #16 is a deaf youngster who because of moderate emotional and social maladjustment continues to have difficulty functioning adequately within a group either at school or within the home. There are indications that the initial cause for his adjustment problems may have been overpermissiveness or overprotection on the part of the parents, and this situation may still prevail. Although at the present time his adjustment problems seem to be for the most part self-generating, he appears to be making some progress in his ability to relate to others, whereas previous efforts to work with him in a nondirective counseling situation had not appreciably affected his behavior. It appears that his experience in the Pilot Project Program did help him to achieve a great deal of insight into his own behavior.

It is the feeling of this examiner that as Subject continues next year in the regular Junior High program that he will very likely also continue to experience the same adjustment problems as he has previously but on a less severe level. These difficulties will very likely be more noticeable within the vocational areas where his competition will consist of mainly his male peers.

NEUROLOGICAL EXAMINATION

Date of examination: January 20, 1967

HISTORY: This boy was born after a pregnancy in which his mother had nausea, vomiting, and some spotting through the first few months. He was born after a ten-hour labor and no abnormalities of the birth or perinatal period were noted. He weighed 4 lbs. 13 oz. and was only 17 1/2 in. in length. He was about six weeks premature. His most serious illness occurred when he was 7 1/2 months of age when he developed pneumococcal meningitis for which he was treated with streptomycin. His development was somewhat slow and he did not walk until sixteen months. No other serious illnesses or injuries have been noted, however, when this boy was about ten years of age he had a convulsive seizure and has had a few since that time. These were apparently of a grand mal type and have been treated with Dilantin, phenobarbital, and Mysoline. Apparently he has not had a seizure for about one year. It is of interest that this boy's mother is reported to have congenital nystagmus. No details of the discovery of this boy's deafness are available but it has been blamed on the meningitis and/or its treatment. In the past this boy has said to have been somewhat irritable and withdrawn.

EXAMINATION - General - The patient is a well-developed, well-nourished 12-year-old boy who looks slightly older than his stated age. His general physical condition seems good and no gross abnormalities are noted although his head tends to be somewhat elongated and narrow.

NEUROLOGICAL EXAMINATION: Examination of the cranial nerves including vision, visual fields, optic fundi, pupillary responses, extraocular movements, etc. is essentially normal except as relates to the hearing. There is a moderate loss of hearing bilaterally. Acuity seems to be slightly better on the right. It is difficult to tell whether air conduction or bone conduction is greatest.

Examination of the motor system reveals no abnormality of station or gait. The patient is well-coordinated, his grip is good bilaterally. No gross weakness or paralysis is noted. Cerebellar functions seem intact. There is no evidence of disease of the spinal cord or peripheral nerves. The deep reflexes are active and equal in the upper extremities, the patellar and Achilles reflexes are slightly hyperactive but equal bilaterally. The plantar responses are normal.

Examination of the sensory system reveals no abnormality.

IMPRESSION:
1. Bilateral deafness, slightly greater on the left, probably secondary to pneumococcic meningitis in infancy.
2. Convulsive disorder, grand mal type, probably also secondary to the above.

Sample Case History cont'd
Subject #16

Hearing Loss

	125	250	500	1000	2000	4000	8000
R.E.	55	60	85	100	95	-	
L.E.	50	65	85	100	-		

Reading and Achievement Test Scores

Gates Reading Tests

Date of Test	Word Recognition Grade Level	Sentence Reading Grade Level	Paragraph Reading Grade Level	Average
/62	2.19	2.67	--	2.4
/63	2.5	2.55	2.35	2.47
/64	3.4	2.8	2.6	2.9
2/65	3.4	3.4	2.4	3.06
3/66	3.6	3.8	2.8	3.36
6/67	3.6	3.9	2.83	3.44
10/67	3.6	3.9	2.9	3.46

Stanford Achievement Tests

Date of Test	Word Recognition	Reading Paragraph Meaning	Vocabulary
4/68	2.3	2.4	3.0

Gray-Votaw-Rogers General Achievement Tests

Date	Reading		Arithmetic		Educational
of Test	Voc.	Comp.	Reas.	Comp.	Grade
6/67	2.1	1.6	1.2	3.8	2.2

Sample Case History cont'd
Subject #16

Graphic Presentation of Judge's Rankings

Subject #16 is another boy for whom the observation record is incomplete, but for more positive cause than the case just presented. This boy demonstrated such improved adjustment that he was phased into regular class attendance during the last semester. This change prevented the observers from obtaining any more than one report during that closing period of the study. The graph depicts the typical oscillation but no discernable slope. However, this boy showed much less unacceptable behavior than a subject like #12. The staff felt he was not so much an emotionally disturbed child as he was the possessor of devious behavior previously reinforced.

Graph Depicting Project Teacher's Evaluations of Behavior Change

The teacher's ratings of this subject's behavior based on the Developmental Sequence of Educational Goals as shown in Figure 24 indicate that significant growth occurred during the first year on the readiness and achievement levels. Ratings at the end of the second year indicate optimal levels of performance except in the areas of order, social behavior, and mastery of intellectual skills.

Staff Ratings of Changes in Rapport With Adults and Peers

Staff members rated this subject as having made moderate improvement in his relationships with adults (mean rating 4.0) and peers (mean rating 4.0).

Entering Behavior

Subject's compulsive need to be the sole center of adult attention resulted in his constantly touching, pushing and an inappropriate display of affection. He continually interrupted adults and attempted to carry on lengthy conversations at inopportune times. The topics of these conversations were generally inappropriate for the situation at hand and exceedingly repetitious in content. If adult attention seemed to diminish his speech increased in pitch and intensity and he would physically attempt to prevent adult withdrawal from his presence. Subject avoided group situations and his relationships with peers consisted of teasing, hitting, or spitting at them. He seemed to desire social contact with peers, but the methods he employed were inappropriate and only served to alienate them further. He responded to praise, but his response to this was inappropriate since he would use this as the excuse for another lengthy, inane conversation to hold the adult's attention. He did not respond initially to the checkmark system. He had an insatiable need for affection. This child was occa-

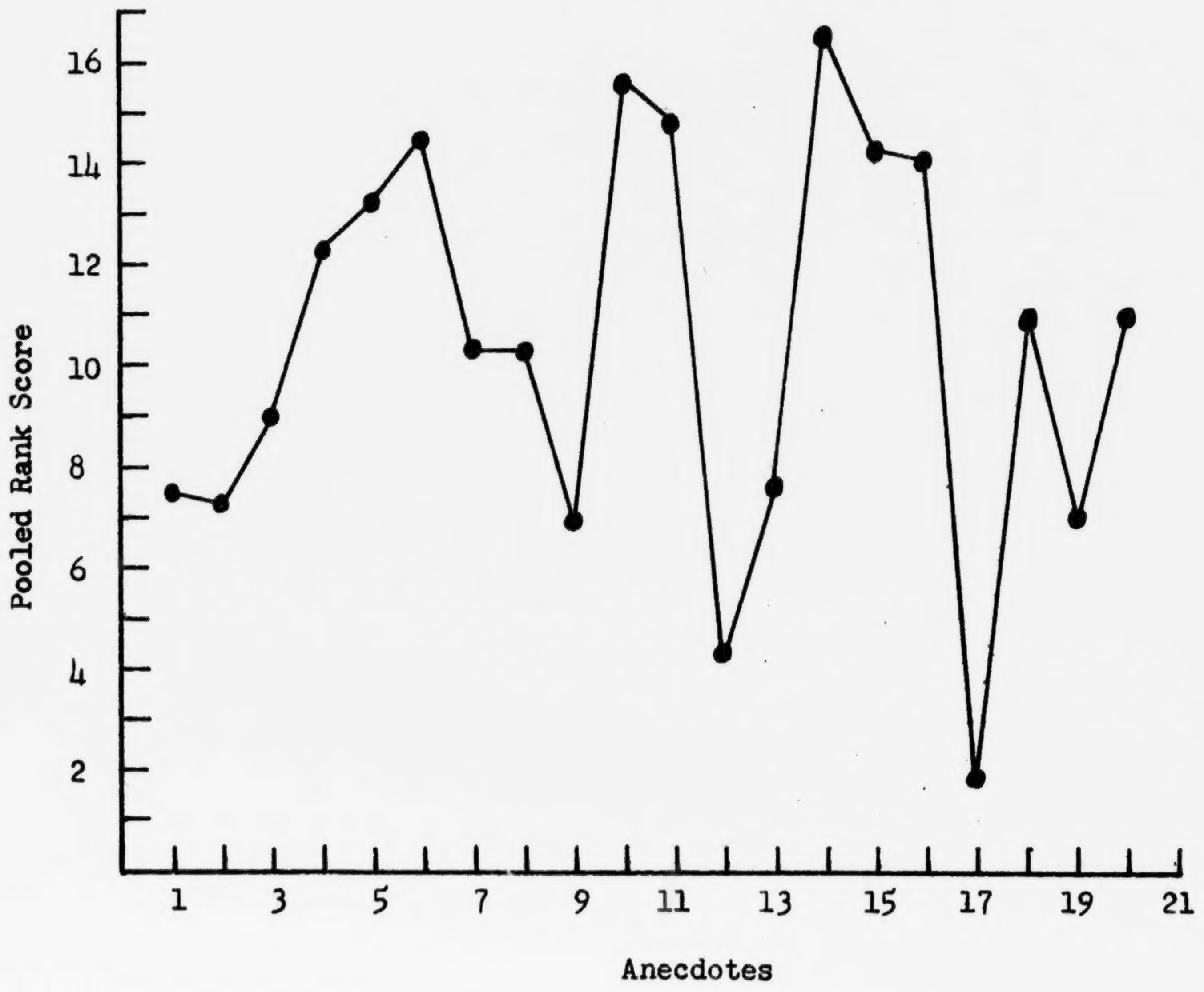


Figure 23. Distribution of ranks assigned to anecdotes. Subject No. 16.

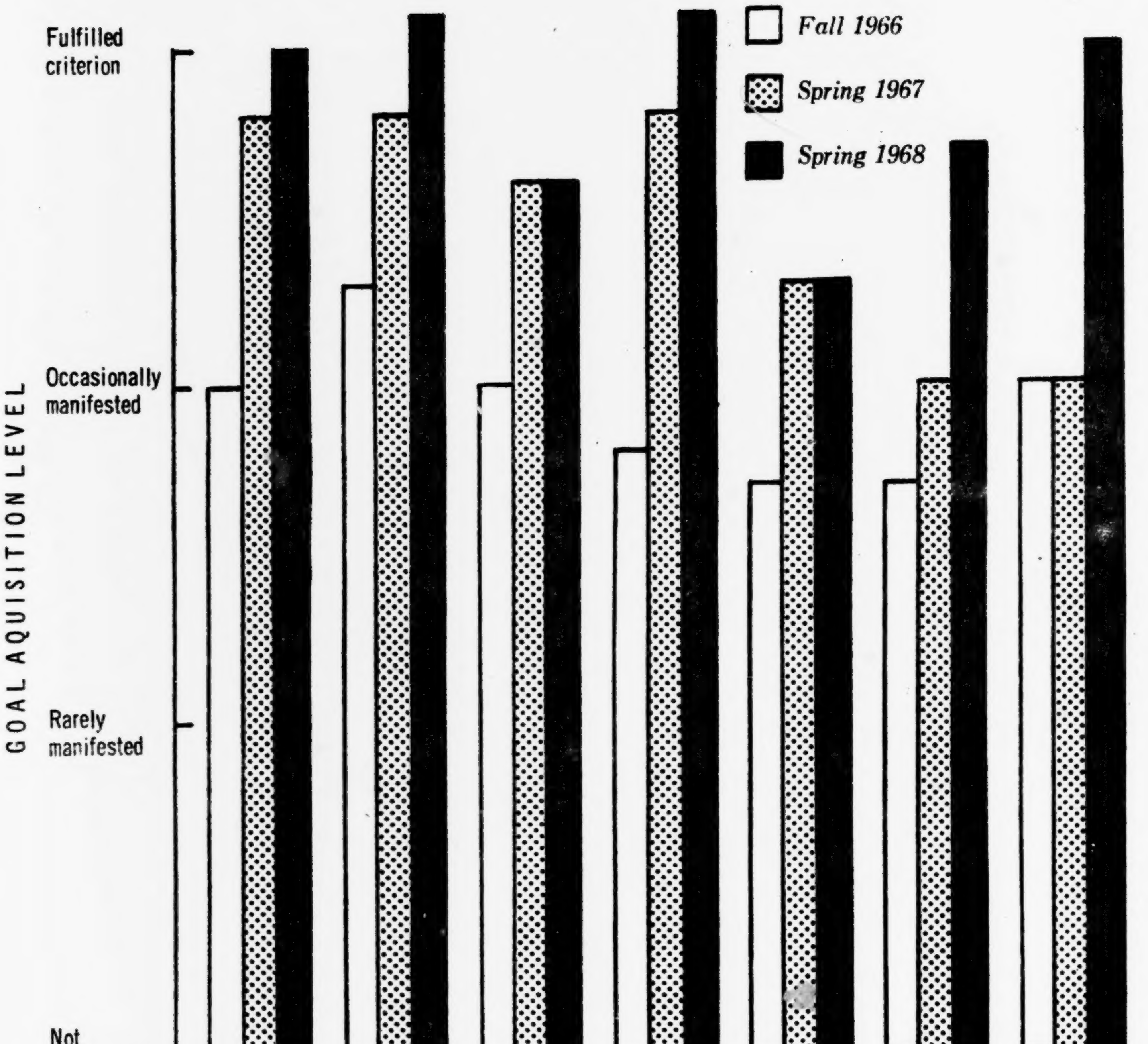


Figure 24. Comparisons of related gains in educational goals for Subject No. 16.

sionally involved in sexual acting out behaviors. He would sometimes have temper tantrums.

Terminal Behavior

Subject had gained some insights concerning his inappropriate behavior, and strove to refrain from touching and engaging adults in nonstop conversations. He began to respond to the checkmark system late in the first year when more meaningful rewards and activities were found for him. He exhibited much less arguing and protesting behavior. He could accept reprimands for inappropriate behaviors and to some extent could better tolerate group situations with peers where he was not the sole center of attention.

Current Status

Subject #16 was enrolled as a residential student in the Junior High School at the California School for the Deaf at Riverside in the Fall of 1968. Because of the difficulties, he was experiencing in his relationships with his peers, he became a day student during the Spring of 1969 and attended school on a minimum day schedule for the remainder of the year.

SAMPLE CASE HISTORY

Subject #19

Race: White

Birthdate: 7-17-55 Place of birth: Lynwood, CA

Marital status of parents: Mother widowed in first year of Project

Mother's occupation: Clerical

Siblings: one sister, b.d. 1959

Onset of deafness: 2 1/2 years Etiology: Unknown

Other deafness in family: None

Educational and/or institutional background

Name	Dates Attended
John Tracy Clinic (summer)	6/59 - 9/59
Private Nursery School	9/59 - 2/60
John Tracy Clinic	11/60 - 1/60
Day Class for the Deaf	9/62 - 10/62
Residential School for the Deaf	1963 - 1966

I. Q. Test scores (Wechsler equivalent)

Date of Test	Score
1/63	81
9/66	104
5/68	98

Psychological Evaluation

Subject #19 was referred for psychological evaluation by Mr. Robert Lennan, Supervising Teacher of the Pilot Project as part of routine re-evaluation procedure for all Pilot Project participants.

At the time of initial application for admission to the regular program at this school (12-3-62), Subject was attending classes at the Dysinger Elementary School in Orange County. He had previously attended a summer session and had had individual training at John Tracy Clinic. Subject is the younger of two children in the family. His sister is four years older than Subject. He is the only member of his family who has a hearing loss and this is reported by his mother as having occurred when he was two and a half years old. Subject was born one and a half months prematurely. Birth weight was five pounds, 10 ounces. Physical development was somewhat beyond normal limits; sitting unaided at 15 months, standing and crawling at 18 months, walking at two years. Subject's mother has an extremely good relationship with her son and uses manual communication proficiently. She is a widow of one and a half years and cares for her two children alone. Subject's father, who died in January, 1967, as the result of homicide, had previously been incarcerated for several months at the Chino State Prison because of his addiction to drugs. It is felt by the mother that the problems surrounding the father's absence from the home, his imprisonment, and his violent death, have had a serious adverse effect upon Subject's emotional development.

Psychological evaluations at John Tracy Clinic May 28, 1959, yielded a Mental Age of 4-6 (C.A. 3-10) with indications of perseveration, reversals, short attention span, and hyperactivity. Testing by the Fullerton School District on April 26, 1961, resulted in a Mental Age of 4 years (C.A. 5-9) on the Leiter Performance Scale and classification as "educable mentally retarded". Neurological examinations have been inconclusive. Education has included training at the John Tracy Clinic, Theodore Roosevelt Nursery classes, and classes in the Centralia School District which eventually excluded him and reported him as being "extremely limited" in academic progress.

Since Subject's admittance into our regular program in January, 1963, his residence hall reports have been characterized by comments such as "refuses to accept discipline", "is very immature", "does not play well with others", "has temper tantrums", and "most of the time is difficult to communicate with". His academic work reflects "no language understanding", and in the classroom it was noted he he "does not communicate with other children. Has little association with them."

A psychological evaluation done here (1-16-63) stated there was "relatively little interpersonal relating and satisfactory attention to tasks". The I.Q. received in the Leiter at that time was 74 which had the qualification "indicates the possibility of higher intellectual potential".

During a second evaluation at this school dated 9-17-63, the WISC Performance Scale, Raven's Matrices, Bender Gestalt, and D-A-P (Human Figure Drawings) were administered. The WISC yielded an I.Q. of 104 and the Raven's a Percentile of 50. It was felt that these scores validly established his I.Q. as at least in the Average Range. It was felt that he perhaps had greater potential. His functioning, however, was reportedly extremely "atypical". It was reported that he studiously avoided looking directly at the examiner and his work habits and general approach were different from those of other children.

Sample Case History cont'd
Subject #19

In June, 1966, just prior to transfer into the Pilot Project and while he was still included in a regular classroom for deaf youngsters at this school, the classroom teacher submitted the following report regarding social development:

> "Subject has remained on the fringe of all group activities during the school year. He has shown little desire to participate in playground activities and needed constant urging to take part. His behavior during games was unpredictable and he often disrupted the progress of a game with unrelated bizarre behavior.
>
> Subject has shown a complete indifference to activities involving group discussions and would slip into what would appear to be fantasy if permitted. If he were corrected during moments of inattentiveness, he would show his displeasure by striking a threatening pose similar to his favorite comic character, 'Superman'. Subject appears to identify himself with Superman and often draws likenesses of Superman as related to himself.
>
> Subject has, it would appear, complex psychological problems that interfere with, and almost block out, academic learning. He is seriously withdrawn. He does not relate in a normal way either to peers or teachers. His academic prognosis I would judge to be poor. It would seem like some of the psychological problems would have to improve before academic success can be achieved."

During the present evaluation period the Leiter International Scale was once more administered to Subject. At this testing he earned an I.Q. of 93 which corresponds to a Wechsler Score of 98 and falls within the Average Range of intelligence. During the testing period he appeared to have interest in the tasks at hand and appeared to plan his approach very carefully. It was noticed, however, that he frequently became careless before the task was finished and his conclusions to the tasks were frequently incorrect.

Subject's academic progress report at the close of his second year in the Pilot Project indicates that his behavior continues to be asocial, but whereas before he was unable to relate directly to other individuals, he can now communicate directly with them. He continues to resist group participation and is very easily upset. He seldom appears to have the bizarre interests that he had manifested earlier.

It is the feeling of this examiner that Subject is a boy of at least Average intellectual potential who continues to suffer from moderate to severe psychological maladjustment. It is felt quite strongly that he is not ready to be included in a classroom with normal deaf children and that he is very much in need of being continued in a program for severely emotionally disturbed boys. He would profit best from a special class placement where special methods could be employed to deal with his social and emotional problems.

NEUROLOGICAL EXAMINATION

Date of examination: January 20, 1967

HISTORY: Very little information is available as to this boy's birth and development. He is said to have been born one and a half months early but weighing 5 lbs. 10 oz. The mother apparently had no serious illnesses during the pregnancy, however, she is said to have taken four quinine pills during the first week. No other details are available at this time.

EXAMINATION - General - The patient is a well-developed, slightly overweight 11-year-old boy in no acute distress. He is alert, cooperative, and oriented but tends to be a little overactive and takes a very aggressive part in his examination. His general physical condition is good and no gross abnormalities are noted.

NEUROLOGICAL EXAMINATION: Examination of the cranial nerves including vision, visual fields, optic fundi, pupillary responses, and extraocular movements is entirely normal except for the hearing which is decreased bilaterally. However, some hearing apparently does exist.

Examination of the motor system reveals no abnormality of station or gait. He is right handed and his grip is good bilaterally. No gross weakness or paralysis is noted. Cerebellar functions are intact, the deep reflexes are active and equal and no pathological ones are elicited.

Examination of the sensory system reveals no abnormality. There is no evidence of disease of the spinal cord or peripheral nerves.

IMPRESSION:
1. Deafness, bilateral, cause undetermined
2. No other evidence of organic disease of the nervous system

Hearing Loss

	125	250	500	1000	2000	4000	8000
R.E.	60	65	100	100	-		
L.E.	-	-	90	95	75	90	75

Sample Case History cont'd
Subject #19

Reading and Achievement Test Scores

Gates Reading Tests

Date of Test	Word Recognition Grade Level	Sentence Reading Grade Level	Paragraph Reading Grade Level	Average
11/66	2.8	--	--	--
6/67	3.1	3.1	2.5	2.9
10/67	3.2	3.6	2.9	3.2
4/68	3.4	3.4	2.9	3.2

Stanford Achievement Tests

Date of Test	Word Recognition	Reading Paragraph Meaning	Vocabulary
11/66	1.9	1.6	--
6/67	2.6	1.7	--
6/68	2.7	1.9	1.4

Gray-Votaw-Rogers General Achievement Tests

Date	Reading		Arithmetic		Educational
of Test	Voc.	Comp.	Reas.	Comp.	Grade
6/67	1.9	1.9	1.4	2.5	1.9
4/68	2.5	2.2	1.2	3.0	2.2

Graphic Presentation of Judge's Rankings

Subject #19 is the second boy for whom ratings of anecdotes show a steady rise across the four blocks of observations. Subject #9 is the other. In spite of the generally higher ranking given, the last several anecdotes, considerable variability is noted. In fact, there is greater variability for the last weeks then for a period near the late Fall of 1967. This phenomenon was described before in Subjects 5 and 7.

Graph Depicting Project Teacher's Evaluations of Behavior Change

The teacher's ratings of this subject's behavior based on the Developmental Sequence of Educational Goals as shown in Figure 26 indicate that the greatest changes in the first year occurred on the

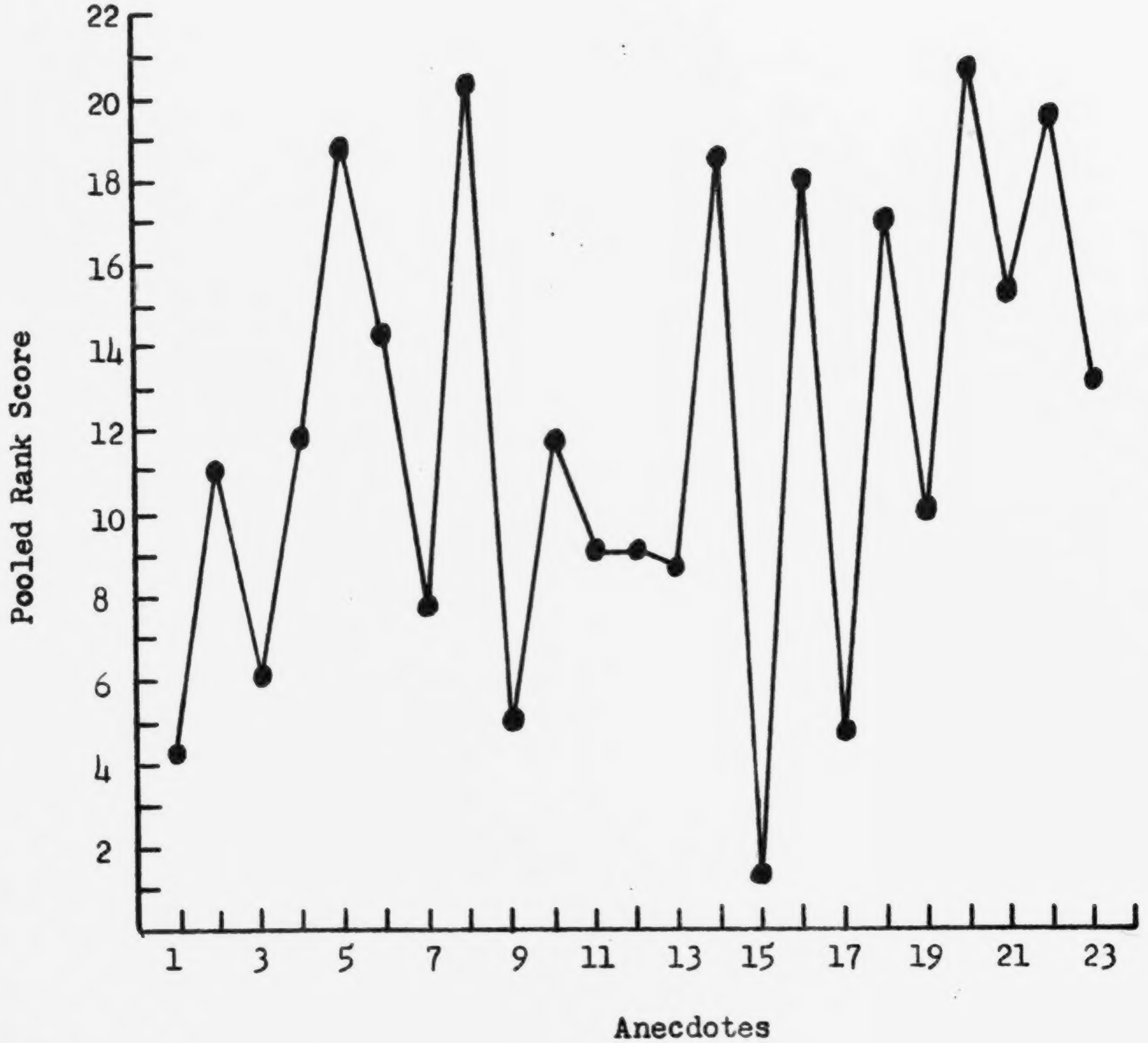


Figure 25. Distribution of ranks assigned to anecdotes. Subject No. 19.

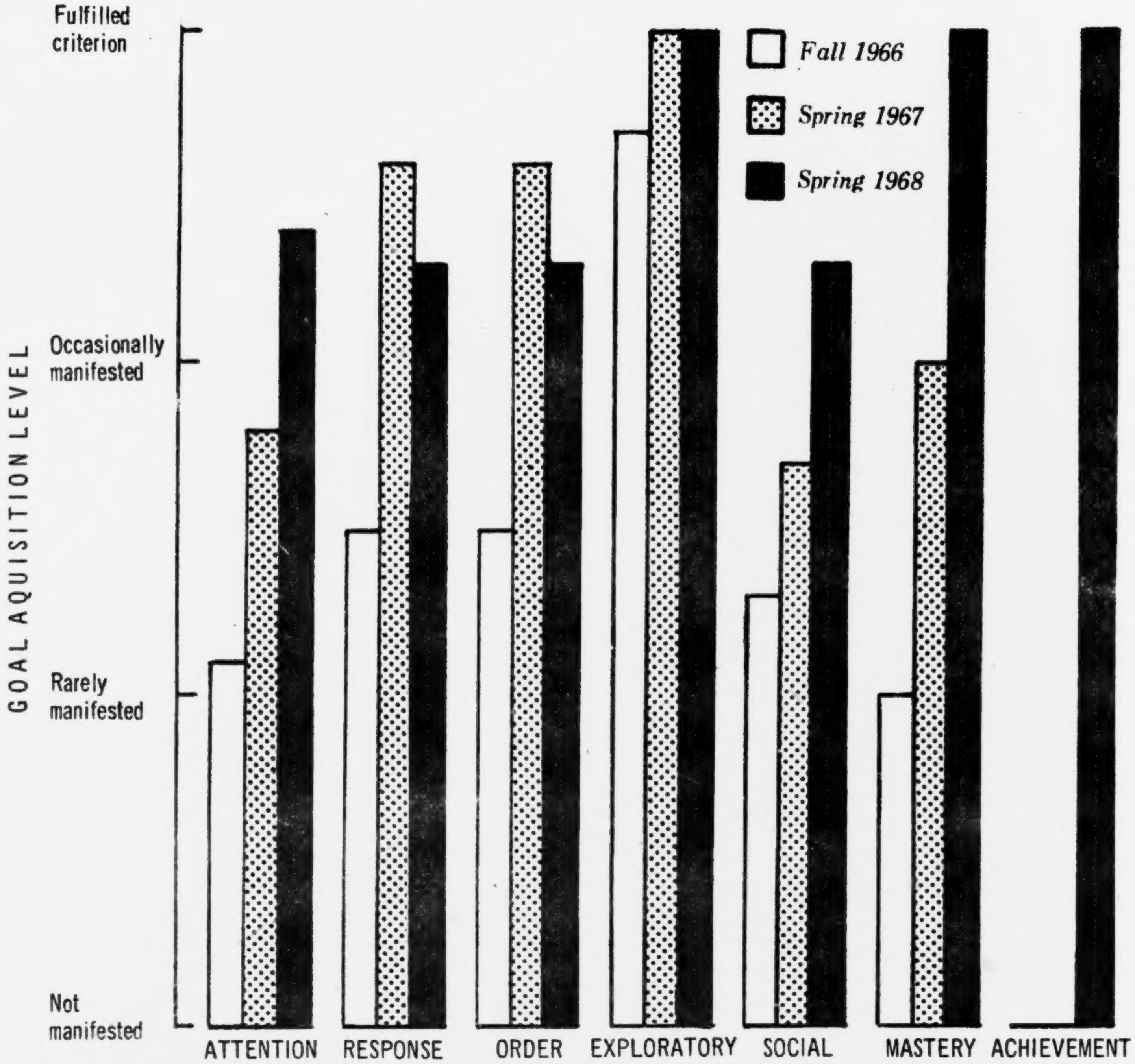


Figure 26. Comparisons of related gains in educational goals for Subject No. 19.

response and mastery levels with less marked changes on the readiness levels of attention, order, exploratory, and social behavior. At the end of the second year, significant continued improvement is shown in attention, order, social behavior, mastery of intellectual skills and the development of intrinsic motivation. Optimal levels of performance within this child's range of ability are indicated in four areas.

Staff Ratings of Changes in Rapport With Adults and Peers

Staff members rated this subject as having made marked improvement in his relationships with adults (mean rating 4.6) and moderate improvement in his relationships with peers (mean rating 3.9) .

Entering Behavior

Subject did not seem to desire social contact with peers. He was a loner and would hide or otherwise avoid being included in group activities. He was passive but if provoked would retaliate. Much of his time was spent in daydreaming and fantacizing behaviors that included a deep preoccupation with monsters, Batman, and Superman fantasies. His persistent involvement with violence was seen in his play activities where he acted out bizarre roles with figures he fashioned out of Kleenex tissues. He hung some of these figures with nooses he had fashioned with string. This behavior became more apparent in the weeks following the murder of his father in the first year of the project. On the rare occasions when he communicated spontaneously, the topic was his monster fantacies. Subject usually appeared unhappy, his facial expression blank, and his general mood one of depression. When he could not avoid group situations and found himself included in peer activities he could usually remain alert, if not responsive. When he was assigned tasks to be completed independently, he would immediately revert to daydreaming.

Terminal Behavior

Subject's ability to communicate and desire to communicate on a more meaningful level were growing as his daydreaming subsided, the monster fantacies were eliminated. He could tolerate group activities for longer periods and he less frequently sought to hide to avoid such activities. His facial expressions grew more varied. He became less of a loner and would occasionally initiate group play with peers. He still had little interaction with his peer group unless it was initiated by himself and on his own terms. He was happier and more content in the school environment.

Sample Case History cont'd
Subject #19

Current Status

Subject #19 was enrolled in a day class for the deaf but has been excluded because of his failure to make a satisfactory adjustment.

SAMPLE CASE HISTORY

Subject #3

Race: White

Birthdate: 4-30-55 Place of Birth: Maywood, CA

Marital status of parents: Separated

Father's occupation: House Mover

Mother's occupation: Secretary

Siblings: three brothers, b.d. 1949, 1950, 1961; one sister, b.d. 1948

Onset of deafness: 14 months Etiology: Influenza

Other deafness in family: None

Educational and/or institutional background

Name	Dates Attended
John Tracy Clinic Friday Clinic Program	11/58 - 1/59
Day class for the Deaf	9/59 -
Day class for the Deaf	6/65
Day class for the Deaf	11/65 - 6/66

I. Q. Test Scores (Wechsler equivalent)

Date of Test	Score
4/66	96

Psychological Evaluation

The Leiter International Performance Scale was administered to Subject #3 at the request of Mr. Robert Lennan, to complete required statistical data on this former Pilot Project student.

Throughout the testing period, Subject was cooperative and enthusiastic. He was very deliberative on most test items, but seldom perceived or corrected errors. Considerable trial and error was employed on the block design items at the X Year level, with evidence of lack of versatility in problem solving and difficulty in the perception of spatial relationships.

Administration of the Leiter Scale at this time yielded an I.Q. of 83, which corresponds to a score of approximately 90 on a scale such as the Wechsler. This score ranks at the 25th Percentile, at the bottom margin of the Average Range of Intelligence.

When tested on the Wechsler Intelligence Scale for Children in March, 1966, Subject #3 earned a score reflecting an I.Q. of 96, which ranks at the 40th Percentile.

Neurological examination

Date of examination: January 13, 1967

HISTORY: This 11-year-old boy was apparently born following a full term pregnancy complicated only by some anemia in the mother and some excessive weight gain up to 40 lbs. His birth weight was 7 lbs. 2 oz. No abnormalities of the birth or early neonatal period was noted. The mother is Rh negative, the father Rh positive but the child is also Rh negative. His only serious illness was influenza at ten months of age and his hearing loss has been related to this illness. His early development was essentially normal though his first tooth appeared somewhat late. This boy was allergic to cow's milk and was raised on a soybean preparation. He is said to have had anemia at one time. His only serious injury occurred when he was ten months old and fell out of bed being unconscious for four or five minutes. This fall occurred just before his influenza.

EXAMINATION - General - The patient is a fairly well-developed, well-nourished 11-year-old boy in no acute distress. His general physical condition seems good.

NEUROLOGICAL EXAMINATION: Examination of the cranial nerves including vision, visual fields, optic fundi, pupillary responses, etc. is essentially normal except for moderate hearing loss in both ears with air conduction better than bone conduction bilaterally.

Examination of the motor system revealed no abnormality of station or gait. The patient's grip is good. No gross weakness or paralysis is noted. The deep reflexes are active and equal and no pathological ones were elicited.

Examination of the sensory system reveals no abnormalities. There

Sample Case History cont'd
Subject #3

is no evidence of disease of the spinal cord or peripheral nerves.

IMPRESSION: Perceptive deafness of moderate degree bilaterally. No other evidence of organic disease of the nervous system.

Hearing Loss

	125	250	500	1000	2000	4000	8000
R.E.	45	55	70	85	100	-	
L.E.	50	55	60	95	95	100	-

Reading and Achievement Test Scores

Gates Reading Tests

Date of Test	Word Recognition Grade Level	Sentence Reading Grade Level	Paragraph Reading Grade Level	Average
11/66	2.45	2.86	2.35	2.67
3/68	2.7		2.2	2.45

Stanford Achievement Tests

Date of Test	Word Recognition	Reading Paragraph Meaning	Vocabulary
11/66	1.8	1.9	1.1
6/67	2.6	1.8	1.2
4/68	2.6	2.3	1.8

Gray-Votaw-Rogers General Achievement Tests

Date	Reading		Arithmetic		Educational
of Test	Voc.	Comp.	Reas.	Comp.	Grade
4/67	1.7	1.5	1.4	3.4	2.0

Sample Case History cont'd
Subject #3

Graph Depicting Project Teacher's Evaluations of Behavior Change

The teacher's ratings of this Subject's behavior based on the Developmental Sequence of Educational Goals as shown in Figure 27 indicate that the greatest changes during his year in the project occurred in his attention and social behavior. Behavior at other levels was rated as optimal in most areas at the end of the year.

Entering Behavior

Subject resented and actively resisted adult authority and control. He physically attacked staff members by kicking them or hitting them with his fist when they sought to control his behavior.

Subject provoked aggressive children until they retaliated but was often protective and considerate of more withdrawn children. He stole from his peers and staff members but steadfastly denied his guilt when confronted with the evidence. Subject showed good judgment and leadership qualities on occasion and quickly responded to the behavior modification techniques.

Terminal Behavior

Subject expressed an awareness of the inappropriateness of his past behavior and a desire to maintain and improve upon his new standard of behavior. He responded to reasoning by staff members and cooperated with them willingly.

He was more tolerant of peers and assisted staff members with other children.

Current Status

Subject #3 is a residential student in the Junior High School at the California School for the Deaf at Riverside. Reports from his teachers and the counselors in his dormitory indicate that he is making satisfactory academic progress and has adjusted to his new environment.

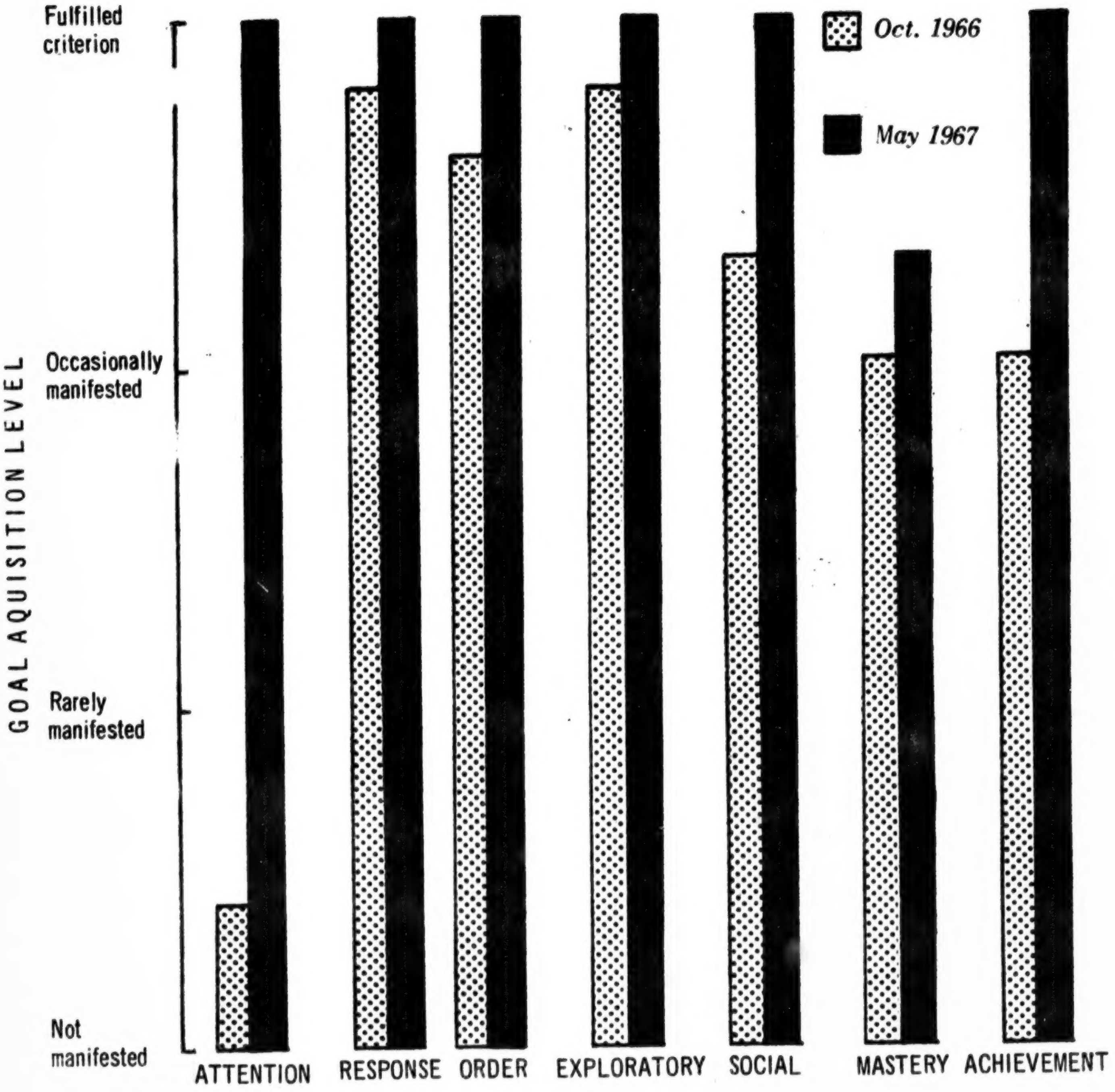


Figure 27 Comparisons of related gains in educational goals for Subject No. 3.

SAMPLE CASE HISTORY

Subject No. 6

Race: Negro

Birthdate: 2/7/59 Place of Birth: Los Angeles, CA

Marital status of parents: Married

Father's occupation: mechanical design engineer

Mother's occupation: postal clerk

Siblings: one sister, b.d. 1958; one brother, b.d. 1964

Onset of deafness: Birth Etiology: Unknown

Other deafness in family: None

Educational and/or institutional background

Name	Dates Attended
Day School for the Deaf	1962 - 1966

I. Q. Test Scores (Wechsler equivalent)

Date of Test	Score
9/66	92
11/68	96

Psychological Evaluation

Subject #6 was tested at the day school for the deaf where he is enrolled in a day school program for deaf children. He has been referred as a possible candidate for the Pilot Project for severely emotionally disturbed boys.

Subject is a very attractive Negro boy of average height and weight. He remained very quiet and non-communicative throughout the testing period and used only his left hand whenever possible.

On the Leiter Performance Scale, Subject established his Basal Age at the V Year Level. He successfully completed three subtests at the VI Year Level, and one subtest at the VIII Year Level, and two subtests at the IX Year Level. He was unable to earn credit at the VII Year Level. The resulting I.Q. on the test was 85 which corresponds to a Wechsler score of approximately 92 and reflects low average intelligence.

Subject's Human Figure Drawings and Bender Gestalt responses were of a nature reflecting excessive anxiety and emotional insecurity. During the testing period these problems were manifested in his withdrawn-type behavior and lack of sureness in his response to test tasks.

In view of current test results, together with case history information on this boy, it is the feeling of this examiner that he would be eligible for and would profit from enrollment in the Pilot Project program.

Psychological Evaluation dated 11-6-68

Subject #6 was referred for psychological testing by Mr. Robert Lennan to complete required statistical data on this former Pilot Project student.

Subject appeared very much at ease throughout the testing period. He was familiar with the procedure and appeared to try very hard. While he initiated no speech, he smiled frequently and appeared to enjoy each success.

Administration of the Leiter International Performance Scale yielded an I.Q. of 90 which corresponds to an I.Q. of approximately 96 on a scale such as the Wechsler. This score has a Percentile Rank of 40 and is classified within the Average Range of Intelligence. Mental age was computed as eight years, nine months. One year ago a corresponding mental age score of seven-nine was computed. Basal age remained at the same VII year level, but highest level of success was increased from the 3rd item of the IX Year level to the 1st item of the XII Year level. No supplementary test was given at this time. Subject earned a score ranking at the 75th Percentile on the Raven's Progressive Matrices in 1967. This ranking score indicates definitely above average reasoning capacity.

Neurological Examination

Date of examination: 1-20-67

PAST HISTORY: This boy is his mother's second child and was born after a normal pregnancy and delivery was also said to be normal. It is noted that the mother was Rh negaiive and the father Rh positive. A determination on the child is not available. This boy's early development is apparently within normal limits. His birth weight was 6 lbs. 3 oz. and he was 22" in length. He held up his head at three months, sat at six months, and walked at nine months; his first tooth appeared at three months. Though his development was normal, it became apparent by the time he was nine months of age that his hearing was defective. Since that time he has been examined by a number of physicians and a hearing aid was prescribed. He is able to understand simple commands and says a few words including his name.

EXAMINATION - General - The patient is a fairly well-developed, fairly tall but somewhat thin 8-year-old Negro boy in no acute distress. His general physical condition is good and no gross abnormalities are noted. He is alert and cooperative.

NEUROLOGICAL EXAMINATION: Examination of the cranial nerves including vision, visual fields, optic fundi, pupillary responses, extraocular movements, etc. is essentially normal except for his hearing which is moderately decreased bilaterally. Bone conduction seems to be greater than air conduction but the patient may be responding to a vibration. There seems to be no marked difference between the hearing in the two ears.

Examination of the motor system reveals no abnormality of station or gait. The patient is left handed, his grip is good bilaterally. No gross weakness or paralysis is noted. Cerebellar functions are intact, the deep reflexes were active and equal and no pathological ones were noted.

Examination of the sensory system reveals no gross abnormality. There is no evidence of disease of the spinal cord or peripheral nerves.

IMPRESSION:
1. Bilateral deafness of moderate degree, type undetermined
2. No obvious evidence of other disease of the central nervous system

Hearing Loss

	125	250	500	1000	2000	4000	8000
R.E.	55	65	85	-			
L.E.	50	70	80	100	75	85	75

Sample Case History cont'd
Subject #6

Reading and Achievement Test Scores

Gates Reading Tests

Date of Test	Word Recognition Grade Level	Sentence Reading Grade Level	Paragraph Reading Grade Level	Average
11/66	1.45	--	--	--
6/67	1.9	2.3	1.6	1.9

Stanford Achievement Tests

Date of Test	Word Recognition	Reading Paragraph Meaning	Vocabulary
11/66	1.0	--	--
6/67	1.6	1.3	--

Gray-Votaw-Rogers General Achievement Tests

Date of Test	Reading Voc.	Reading Comp	Arithmetic Reas.	Arithmetic Comp	Educational Grade
6/67	1.5	1.7	1.7	2.1	1.8

Graph Depicting Project Teacher's Evaluations of Behavior Change

The teacher's ratings of this subject's behavior based on the Developmental Sequence of Educational Goals as shown in Figure 28 indicate that the most significant changes at the end of the year occurred on the readiness levels of attention, response, and order and at the mastery level. Intrinsic motivation was low as shown by the ratings on the achievement level.

Entering Behavior

Subject was withdrawn and did not seek contact with peers in the first weeks of project except in an aggressive manner. He was very responsive, however, to adult attention and affection, if it were on a one-to-one basis. He resisted following directions of adults and sought to exert control over his environment by dawdling, delaying, or otherwise disrupting planned activities. He lapsed into daydreaming in a group situation. Subject feared failure and this was seen in his resistance to new tasks or new situations. He could not tolerate

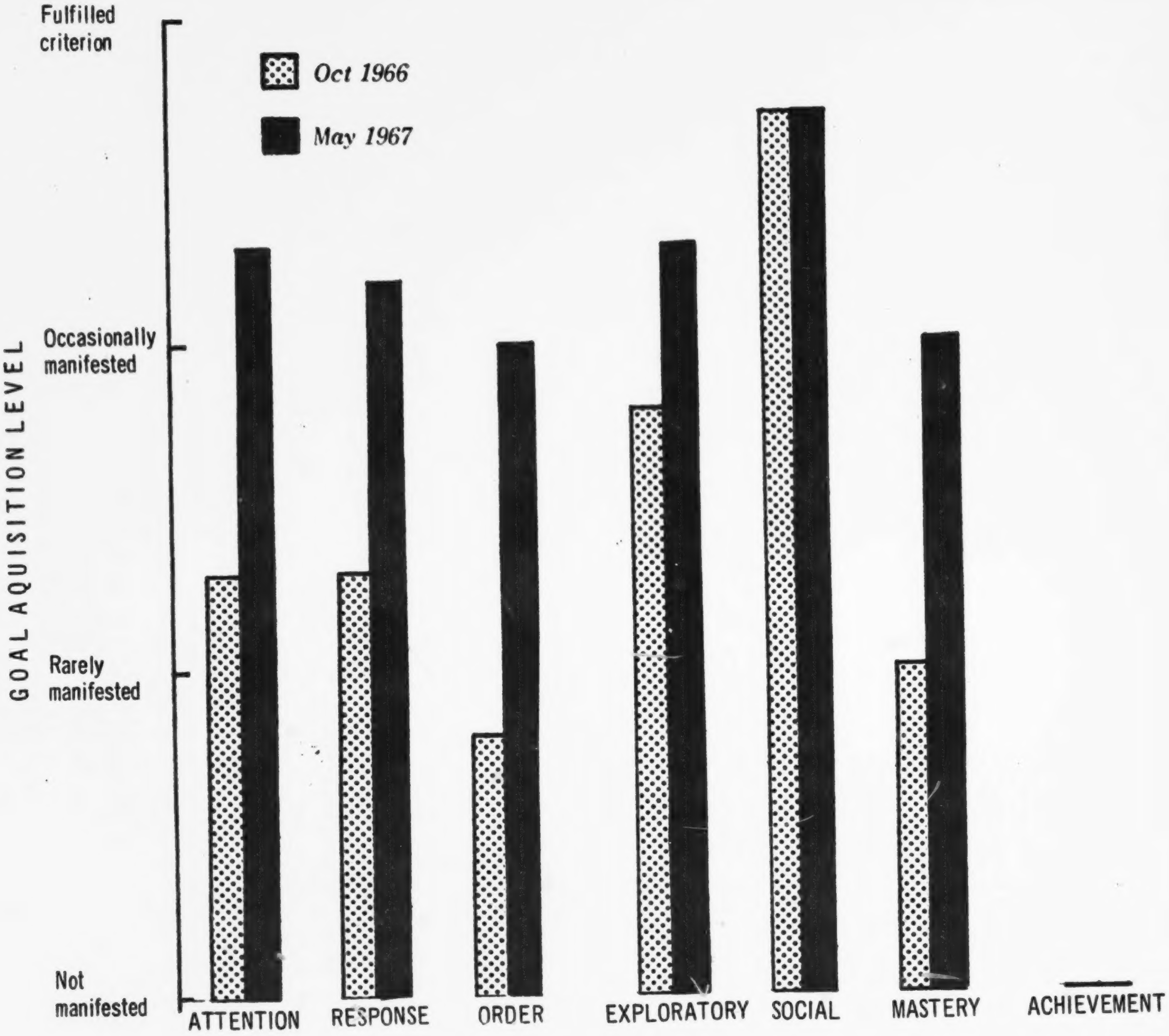


Figure 28. Comparisons of related gains in educational goals for Subject No. 6.

competition. He responded to the checkmark system after his initial indifference was overcome.

Terminal Behavior

Subject responded to praise and was proud of his achievements. He was no longer as reluctant to do as requested. He approached new situations and tasks with greater self-confidence as his fear of failure subsided. He was able to attend to assigned tasks without being unduly distracted, and could function appropriately in group activities.

Current Status

Subject #6 is a residential student in the Lower School at the California School for the Deaf at Riverside. His teacher and the counselors in his dormitory report that he is making slow academic progress and has made a satisfactory adjustment to his new environment.

SAMPLE CASE HISTORY

Subject #8

Race: White

Birthdate: 1-15-56 Place of Birth: Yucaipa, California

Marital status of parents: Divorced - Mother remarried

Stepfather's occupation: machinist

Mother's occupation: housewife

Siblings: three brothers, b.d. 1951, 1962, 1963; two sisters, b.d. 1964, 1967

Onset of deafness: Unknown Etiology: Premature (7 months)

Other deafness in family: None

Educational and/or institutional background

Name	Dates Attended
Day class for the deaf	9/62 - 1/63
Day school for the deaf	10/63 - 9/64
Day school for the deaf	4/65 - 9/66
Day class for the deaf	9/66

I. Q. Test Scores (Wechsler equivalent)

Date of Test	Score
5/67	96
5/68	94

Psychological Evaluation

Subject #8 was referred for psychological evaluation by Mr. Robert Lennan, Supervising Teacher of the Pilot Project, as part of routine re-evaluation procedure for all Pilot Project participants.

Subject was first seen by this examiner on May 31, 1967, during an evaluation which took place in Subject's home to aid in determining his eligibility for enrollment in the Pilot Project for Emotionally Disturbed Deaf Boys. At that time the Leiter Performance Scale was administered to Subject for the first time. He earned an I.Q.

of 88 which corresponds to a Wechsler I.Q. of about 96 and reflected at least Average intellectual functioning. This score falls at approximately the 40th Percentile.

During that evaluation period the Raven's Matrices and the Human Figure Drawings were also administered. On the Raven's Matrices, Subject applied himself relatively well and worked with accuracy. On this test he earned a percentile rank of 95 which falls within the "Intellectually Superior" classification on this test.

Human Figure Drawings were of a nature suggesting serious social and emotional difficulty. There were strong indications that Subject suffered from moderate to extreme social maladjustment. Bender Gestalt responses also suggested emotional disturbance as well as emotional immaturity. There were no clear cut indications of CNS pathology. It was felt by this examiner that Subject was an emotionally disturbed boy whose variation in test scores indicated that he may be of even higher intellectual potential. It was felt that he would qualify for and profit considerably from the Pilot Project program. Subject was admitted into the Pilot Project on September 5, 1967.

Subject is the second of six children born to his mother. The four children younger than Subject were fathered by his stepfather who is employed as a machinist. On the application for Subject's admission to this school, his mother indicated that one of Subject's half brothers suffers from hemophilia and another half brother suffers from a hearing loss. It also should be noted that his stepfather has a cleft lip and palate.

It would seem pertinent in this report to describe briefly the conditions in which this family lives. The family lives in an older home which is located in a block of rather rundown business buildings on a main thoroughfare. It is understood that the family rents the home and it is evident that little care is extended to the upkeep of the yard or of the structure. At the time of the initial evaluation period in the home, the Subject's mother was apparently under the influence of alcohol and it was noticeable that her face and eyes were badly bruised. She and two of her younger children were dressed in their bed clothes although the home visit was at 1:00 p.m. by appointment. Subject's mother did not readily know the whereabouts of Subject and indicated that he was in the habit of leaving the home for several hours at a time either during the day or at night and that the police had been occasionally involved.

In discussing with the mother the possibility of Subject's enrollment in the Pilot Project program she was quite concerned about the financial situation of the family. It is noted that following Subject's enrollment at this school, it became necessary to apply for a Certificate of Inability to the County of Los Angeles. The Certificate of Inability was awarded on March 26, 1968.

During the present evaluation period Subject was very cooperative but was quite immature in his approach to the solving of the test tasks. When he did apply himself to the tasks at hand he seemed to get bogged down in detail and he used an unusual amount of time looking for errors where there were none. This same observation was noticed during his initial evaluation which took place in the home. On the Leiter International Performance Scale, Subject presently established his basal age at the 9 year level and went on to successfully complete three subtests at the 10 year level and one subtest at the 12 year level. His I.Q. of 85 earned on this test corresponds to a Wechsler I.Q. of approximately 94 and reflects Low Average intellectual functioning.

The scores earned during the present evaluation period correspond closely to the scores earned previously. It was noted by the examiner that there appeared to be very little change in Subject's overall behavior as noted during the two testing periods.

In summary, Subject #8 is a deaf boy of at least Low Average intellectual functioning who according to dormitory and classroom reports continues to suffer from moderate to severe psychological maladjustment. It is strongly felt by this examiner that Subject would profit significantly from being included at least one more year in the type of program in which he is presently enrolled. It is felt that he would have extreme difficulty adjusting at this point to a classroom designed for normal deaf children.

Neurological Examination

Date of Examination: November 17, 1967

HISTORY: This 11-year-old boy was born prematurely at about seven months, weighing only 2 lbs. 13 oz. He was in an incubator for about three months by which time he weighed 4 lbs. 15 oz. He has had serious hearing loss since birth. He has also had asthma but no other serious illnesses of any sort. He wears a hearing aid and is able to talk to a certain extent.

EXAMINATION - General - The patient is a fairly well-developed, fairly well-nourished 11-year-old white boy who seems somewhat small for his age. He is alert and very cooperative, showing good intelligence and cooperating better than even might be expected in the examination. His general physical condition is good and no gross abnormalities are noted.

NEUROLOGICAL EXAMINATION: Examination of the cranial nerves including vision, visual fields, optic fundi, pupillary responses and extraocular movements is essentially normal except for his hearing which is markedly decreased bilaterally, but about equal. Air conduction and bone conduction are similar. The patient can hear well with the stethoscope in his ears but cannot hear his own heart. His speech is fair with moderate dysarthria and poor tone control.

Examination of the motor system reveals no abnormality of station or gait. The patient appears to be right handed and right eyed as well as right footed. No gross weakness or paralysis is noted, cerebellar functions are intact. The deep reflexes are active and equal in the upper extremities, they are slightly hyperactive but equal in the lower extremities. The plantar responses are normal.

Examination of the sensory system reveals no abnormalities.

IMPRESSION: Deafness, congenital, due to prematurity, apparently nerve type.

Hearing Loss

	125	250	500	1000	2000	4000	8000
R.E.	NT	25	40	65	75	75	65
L.E.	NT	0	50	60	75	80	70

Reading and Achievement Test Scores

Gates Reading Tests

Date of Test	Word Recognition Grade Level	Sentence Reading Grade Level	Paragraph Reading Grade Level	Average
11/67	2.6	2.78	2.2	2.52
4/68	2.78	2.9	2.33	2.67

Sample Case History cont'd
Subject #8

Reading and Achievement Test Scores

Stanford Achievement Tests

Date of Test	Word Recognition	Reading Paragraph Meaning	Vocabulary
4/68	2.0	1.5	1.1

Gray-Votaw-Rogers General Achievement Tests

Date	Reading		Arithmetic		Educational
of Test	Voc.	Comp.	Reas.	Comp.	Grade
4/68	1.8	2.0	1.6	3.3	2.2

Graphic Presentation of Judge's Rankings

Subject #8 and the four that follow being replacement subjects added in the second year are represented by anecdote plots for one year only. Figure 29 gives the distribution of ranks for 17 observations made on Subject #8 during the school year 1967-68. Ratings in the last semester contain both the highest and lowest ranks. The mean of the last half is, however, higher than the first half.

Graph Depicting Project Teacher's Evaluations of Behavior Change

The teacher's ratings of this subject's behavior based on the Developmental Sequence of Educational Goals as shown in Figure 30 indicate that the only significant changes that occurred in his behavior during the year he was enrolled in the project were in the area of social behavior and his mastery of academic skills.

Staff Ratings of Changes in Rapport With Adults and Peers

Staff members rated this subject as having made moderate improvement in his relationships with adults (mean rating 4.0) and peers (mean rating 3.8).

Entering Behavior

Subject displayed a belligerent attitude and had quick temper. This often seemed to be a device he employed to manipulate situations rather than a genuine demonstration of his feelings. He was easily provoked and would curse at and physically attack staff members. He

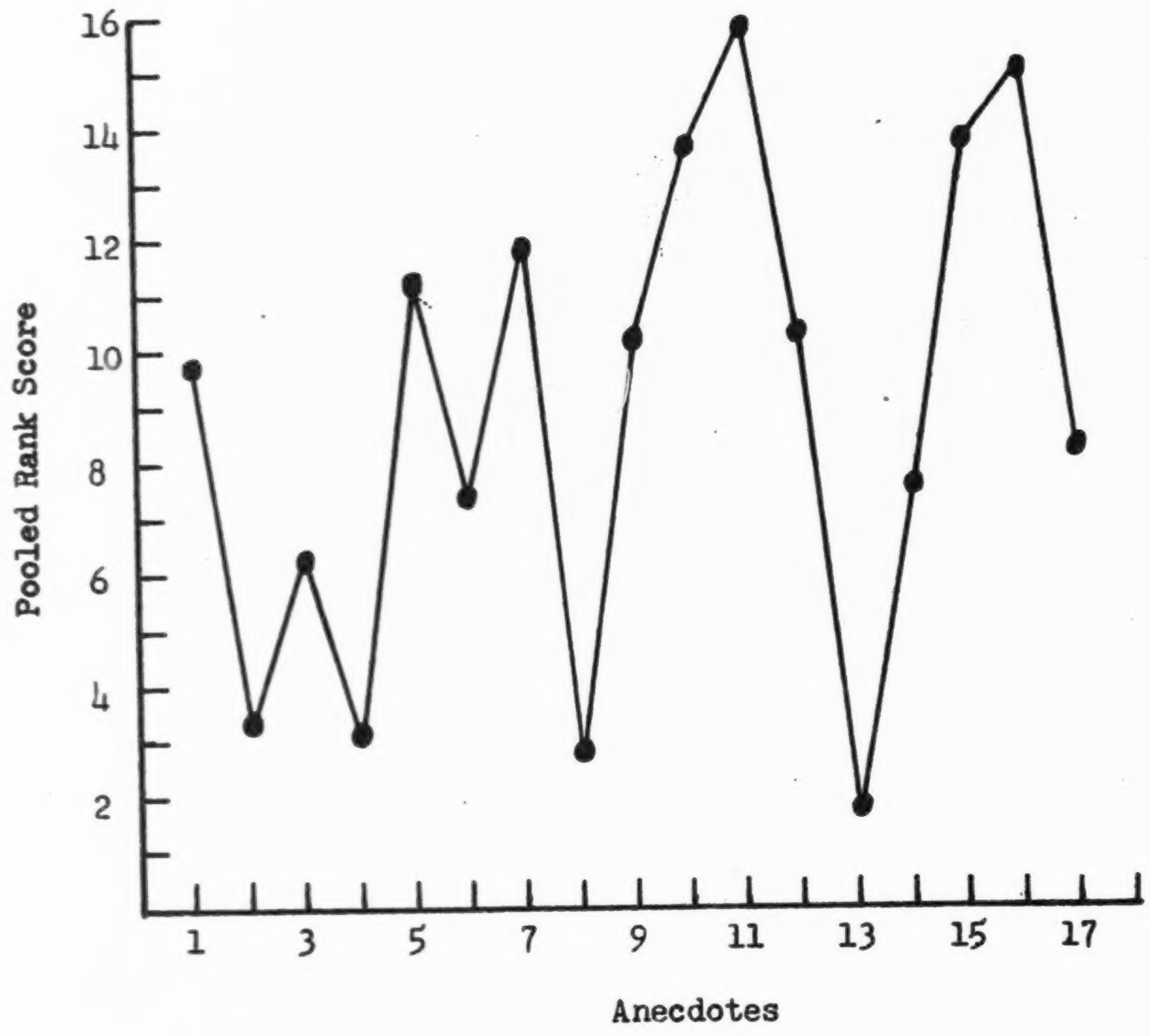


Figure 29. Distribution of ranks assigned to anecdotes. Subject No. 8.

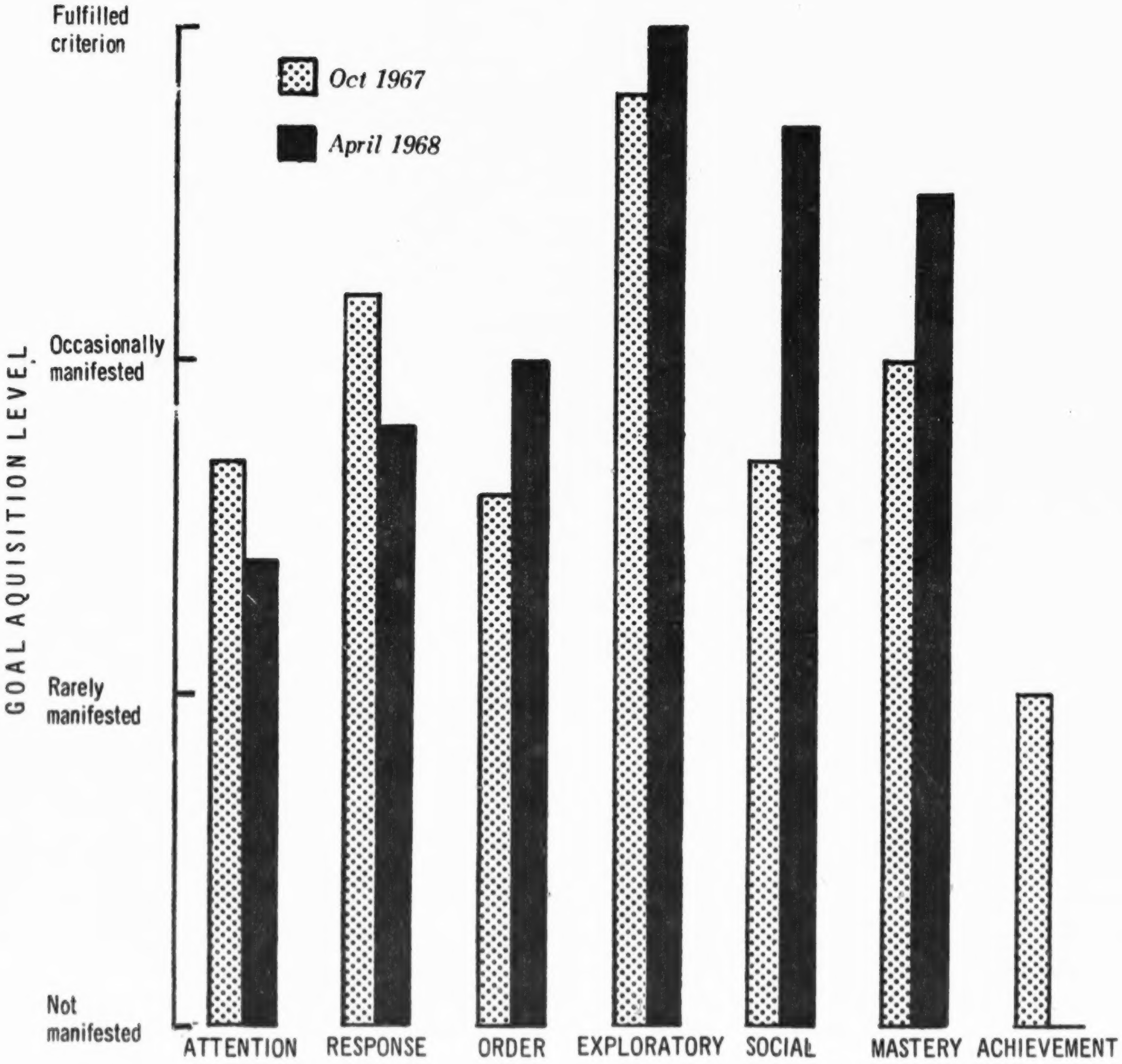


Figure 30. Comparisons of related gains in educational goals for Subject No. 8.

resented criticism and was quite obstinate in demanding his own way. Subject was extremely alert and cognizant of all that occurred in his environment. He constantly sought attention and recognition of his accomplishments. He had a basic distrust of adults and was constantly on the defensive with them and frequently accused them of lying. This was seen as a way of protecting himself in what he perceived to be threatening situations. He seemed genuinely eager to learn but his aggressive behavior interfered with his performance in the classroom. He was a "thumbsucker".

Subject's behavior with peers was extremely belligerent and aggressive. He was verbally and physically abusive with other children. He resisted entering into group activities and preferred playing by himself in his room.

Terminal Behavior

Subject had developed affectionate relationships with several staff members and confided in one dormitory counselor in particular. He was able to control his temper to a large extent and had fewer outbursts of belligerent behavior. He was highly responsive to the behavior modification system and proudly showed staff members his completed checkcard at the end of the school day.

He could often be teased out of a bellicose mood. The greatest behavioral change was seen in the dormitory setting. His behavior in the classroom continued to be marked by resistance to initiating and completing tasks and correction of his work.

Subject entered into group activities willingly but reacted violently when he lost in games or when he felt his possessions were threatened. He continued to have difficulty in maintaining harmonious relationships with his peers. Frequent episodes of belligerent behavior continued to occur but of shorter duration. As in the beginning, much of this behavior was seen as contrived and manipulative in nature.

Current Status

Subject #8 has been excluded from the day class program in which he was enrolled following the termination of the project. His mother was committed to a state hospital for the mentally ill because of her acute alcoholism. At the time of her committment, the Subject was placed in juvenile hall. He has subsequently been placed in a foster home and is not currently attending school.

SAMPLE CASE HISTORY

Subject #11

Race: White

Birthdate: 10/30/58 Place of birth: Richmond, Virginia

Marital status of parents: married

Father's occupation: civilian technician on missile tracking ship

Mother's occupation: housewife

Siblings: two brothers, b.d. 1956 and 1963

Onset of deafness: birth Etiology: Rubella

Other deafness in family: none

Educational and/or institutional background

Name	Date attended
State Hospital for the Mentally Ill	8/64 - 1/66

I. Q. Test scores (Wechsler equivalent)

Date of Test	Score

Unable to administer tests to Subject

Psychological Evaluation

Subject #11 was referred for psychological examination by Miss Paxson, Supervising Teacher of the Lower School Department, due to bizarre behavior during her educational evaluation of him.

Subject is one of three children of an electronics technician and his wife. A fourth child is expected soon. Subject is reported by the parents to be a rubella deafened child. They initially described him as unmanageable at home, a perfectionist, and unaffectionate. Subject's father stated that Subject once spent a few months in a "residential home" where most of the other children were mongoloids, but that at U.C.L.A. he had been diagnosed as of average intelligence based on observation in a play therapy room.

During the present evaluation Subject could not be interested in the test materials though attempts were made, unsuccessfully, to administer the Leiter International Performance Scale and the Good-enough. Subject's behavior involved extreme obsessive-compulsiveness. For example he perseverated in making lamps out of all materials he could manipulate; he repeatedly straightened blotters and other items in the room and continually gritted his teeth and pulled his ear. At no time would he look directly at the examiner nor would he relate in even a minimal way. In the play therapy room he was interested only in objects and did not play with the dolls or any of the other representations of people. Destructiveness was noted in his play as well as other oppositional behavior such as trying to run away, attempting to pull down the venetian blinds and scribbling on the test materials. The parents then related that this behavior pattern was typical of Subject with the exception that he was able to relate somewhat normally to his mother and brother at home. However, this was not observed to be the case in his reaction to his mother during the evaluation.

It is felt that the obsessive-compulsiveness, the withdrawal, and the extreme emotional detachment that characterize Subject are best interpreted in terms of a diagnosis of autism with probable severe bilateral hearing loss. The severity of the emotional disturbance makes an accurate appraisal of intelligence impossible. However, the level of skill and insight he was able to demonstrate in playing with toys such as the pounding board was more that of a child three years old than one of five.

In cases where maternal rubella is the cause of deafness and there is also present a markedly awkward gait suggestive of neurological dysfunction as in Subject's situation, the probability of a chronic brain syndrome must be considered. However, this would require medical evaluation.

In summary the diagnosis is autism with possible organic brain damage. Intelligence level is undetermined.

Recommendations:

1. In my opinion this child's primary problem is psychosis, not deafness, and unless or until this illness is successfully treated, it seems inprobable that Subject will be able to function in any existing educational setting for deaf children.

2. The parents were informed of the diagnosis and the possibility of considering hospitalization was discussed.

3. A complete neurological and psychiatric examination is needed in order that the best possible recommendation can be made for placement of this child.

Sample Case History cont'd
Subject #11

Neurological Examination

Date of examination: February 3, 1967

PAST HISTORY: This patient was born after a pregnancy that included the mother having German measles at about two and a half months, otherwise the pregnancy was uneventful. The labor lasted about eight hours and the patient breathed spontaneously. He weighed 6 lbs. 1 oz. and was 19 inches in length. His development was somewhat slow. He held up his head at two months, sat alone at thirteen months, and walked at nineteen months. His first tooth appeared at eleven months. He ate rather poorly and had difficulty nursing. His injuries included a skull fracture at two and a half years of age; the seriousness of this is not known. At five years of age he fractured his collar bone; he has had no other serious illnesses, operations, or injuries. He has had electroencephalograms in 1961 and 1963 and has been examined at the University of California at Los Angeles Medical Center; however the reports of these examinations and tests are not available at this time.

EXAMINATION - General - The patient is a somewhat underdeveloped 8-year-old boy whose head circumference is only 49 cm. No gross abnormalities are noted. The child is quite hyperactive though he appears to want to cooperate; however at any pause in the examination he immediately began some activity. He seemed to have no idea of what proper behavior might be though he did not seem to be "bad" intentionally. He frequently made a repetitious noise which was fairly normal in tone and intonation but could not be said to be particular words.

NEUROLOGICAL EXAMINATION: Examination of the cranial nerves including vision, visual fields, optic fundi, pupillary responses, extraocular movements, etc. is essentially normal except that the fundi could not be well visualized because of poor patient cooperation and the hearing seems to be completely absent.

Examination of the motor system reveals no abnormality of station or gait. It is not possible to determine whether the patient is right or left handed. His grip is good bilaterally. No gross weakness or paralysis is noted. Cerebellar functions are intact. The deep reflexes are active and equal.

Examination of the sensory system reveals no abnormalities as far as can be determined. There is no evidence of disease of the spinal cord or peripheral nerves.

Sample Case History cont'd
Subject #11

IMPRESSION:
1. Deafness, bilateral, possibly complete
2. Possible mental retardation vs. psychiatric difficulties

DISCUSSION: It is reported that this boy has been in Camarillo State Hospital for two and a half years. His counselor feels that he is completely out of touch with the world most of the time but seems to be responding to care and help here at the school.

Hearing Loss

	125	250	500	1000	2000	4000	8000
R.E.		No Response					
L.E.		-	95	-			

Reading and Achievement Test Scores

Subject was unable to complete any of the achievement tests.

Entering Behavior

Subject was severely withdrawn. He had no communication and no eye contact. He constantly rocked his head or body in a definite rhythm. He made bizarre vocalizations, touched, smelled, tasted, and stared at everything he came in contact with. He could not tolerate sitting in a chair in the classroom. Physical restraint was necessary at all times to prevent him from running away, harming others or destroying property. He made frequent unprovoked physical attacks on peers. Subject responded anxiously and apprehensively to food, and ate ravenously. He would throw any object at hand indiscriminately (usually at lights). He laughed or cried for long periods of time for no apparent outward reason. He was not toilet trained. It was noted by the project staff that often his apparent state of being out of contact with reality seemed to be premeditated and deliberate in order to distract or control situations. It was felt that he was capable of waiting long periods of time for a split-second's opportunity to achieve his ends. Immediate candy rewards motivated him in structured, one-to-one situations for short periods.

Terminal Behavior

Subject could tolerate sitting at a desk for periods as long as 25 minutes and successfully complete simple puzzles with delayed candy rewardson a ratio reinforcement schedule. Eye contact was established for longer periods. A degree of physical restraint was still necessary although he could be permitted to move fairly freely as he became more aware of surroundings and displayed more appropriate behavior. His actions became somewhat more deliberate and less impulsive. He continued to throw objects and attack other children.

Current Status

Subject #11 is a patient in the children's unit at a state hospital for the mentally ill.

SAMPLE CASE HISTORY

Subject #13

Race: White

Birthdate: 7-13-59 Place of birth: Van Nuys, CA

Marital status of parents: married

Father's occupation: machine operator

Mother's occupation: housewife

Siblings: one sister, b.d. 1958

Onset of deafness: birth Etiology: unknown

Other deafness in family: none

Educational and/or institutional background

Name	Dates attended
Pre-school	9/63 - 3/64 (20 days attendance)
Day school for the deaf	9/65 - 6/66

I. Q. Test scores (Wechsler equivalent)

Date of test	Score
9/67	100
5/68	115

Psychological Evaluation

Subject #13 was referred for psychological evaluation by Mr. Robert Lennan, Supervising Teacher of the Pilot Project as part of routine re-evaluation procedure for all Pilot Project participants.

Subject was first tested by this examiner in his home as part of the visit to determine his eligibility for enrollment in the Pilot Project for Emotionally Disturbed Deaf Boys. It was reported at that time that throughout the testing period Subject displayed extremely poor ability to concentrate. His attention span was extremely short and he appeared to frequently slip into fantasy. With constant encouragement he was able to make corrections, but at no time were corrections spontaneous.

On the Leiter International Scale which was administered at that time Subject earned an I.Q. of 95 which corresponds to a Wechsler I.Q. of 100 and reflects Average intellectual functioning. Although his score fell within the Average Range, he worked at such a slow pace and with such poor concentration that it was doubtful that he was capable of functioning at an Average level. The Human Figure Drawings which he produced during that evaluation period were quite bizarre and strongly suggested social and emotional maladjustment.

Subject is the younger of two children of a machinist and his wife. He began his formal schooling September, 1965, at the Mary E. Bennett School in Los Angeles and continued in that program until June 17, 1966. Information sent to us from the Mary E. Bennett School included the following information in regard to his school history:

> "Subject entered Mary E. Bennett School, preschool class (kindergarten level) on 9/63. He attended only 20 days and was withdrawn 3/64. (It is believed the family moved from the district at that time.) He re-entered the school 9/65 and was placed in a group for young children (6 and 7 year olds) with emotional problems. In this group he showed a real potential for learning and some improvement in response to group procedures, ability to get along with others, and attention span. However, this fall he has been in a group with somewhat slower learning deaf children at first grade level and has had many difficulties. There is some hyperactivity but also much compulsive and perseverative behavior, aggression, and hostility." "(This report was sent to Mr. Robert Lennan, Pilot Project Supervisor, and was dated January 20, 1967)."

Subject was admitted to the Pilot Project in September, 1967. Progress reports sent to the parents at the end of his first year in the Pilot Project program indicate that although some growth was noted both in the dormitory and in the classroom, it was considerably below average when compared to the other members of his class. He continued to show a great deal of hostility in group activities and particularly in the classroom his daydreaming tended to interfere with his learning progress.

During the present evaluation period the Leiter International Performance Scale was once again administered to Subject. During the evaluation period he was much more cooperative than he had been in the previous evaluation period. He was able to plan his approach to the test tasks very carefully. However, it was noted that he had a tendency to become careless at the conclusion of each task. During this testing period Subject earned an I.Q. on the Leiter of 113. This score corresponds to a Weschler I.Q. of approximately 115 and reflects Bright Normal intellectual potential. The increment shown on this test over the previous test results indicates that Subject has indeed made considerable growth in his ability to concentrate and plan his approach in problem solving.

It is the feeling of this examiner that Subject is a boy of at least Bright Normal intellectual potential who continues to suffer from moderate to severe psychological maladjustment. It is felt that he has not made the kind of progress in his one year of enrollment in the Pilot Project program that would allow him to function adequately in a classroom situation with normal deaf children. He is very much in need of being continued in an academic classroom where the teaching-learning situation is designed for children with severe emotional problems.

Neurological Examination

Date of examination: November 17, 1967

HISTORY: Essentially no history is available concerning this boy. The pregnancy and birth were said to have been normal. He was delivered in a hospital. No cause for his deafness has been determined. He has had no serious illnesses.

EXAMINATION - General - The patient is a fairly well-developed, fairly well-nourished 8-year-old boy in no acute distress. He is cooperative in the examination. His general physical condition is good and no gross abnormalities are noted.

NEUROLOGICAL EXAMINATION: This boy's cerebral functions seem to be fairly good. He is able to write his name and to copy other printing but does not seem to understand what he reads.

Examination of the cranial nerves including vision, visual fields, optic fundi, pupillary responses, extraocular movements, etc. is essentially normal except as relates to hearing where there is a rather marked loss. He has some hearing but this is quite limited. There seems to be some bone conduction but the tuning fork is heard only slightly by air.

Examination of the motor system reveals no serious abnormalities. He appears to be right handed and right footed. The deep reflexes are somewhat hypoactive but equal.

Examination of the sensory system reveals no abnormalities. He does not produce any intelligible speech.

IMPRESSION: Deafness, cause undetermined
No other evidence of organic disease of the nervous system

Sample Case History cont'd
Subject #13

Hearing Loss

	125	250	500	1000	2000	4000	8000
R.E.	50	55	70	80	90	90	30
L.E.	50	70	75	85	100	-	

Reading and Achievement Test Scores

Gates Reading Tests

Date of Test	Word Recognition Grade Level	Sentence Reading Grade Level	Paragraph Reading Grade Level	Average
4/68	1.3	1.4	1.3	1.3

Stanford Achievement Tests

Unable to test

Gray-Votaw-Rogers General Achievement Tests

Date of Test	Reading		Arithmetic		Educational Grade
	Voc.	Comp.	Reas.	Comp.	
4/68	0	0	1.2	0	.3

Graphic Presentation of Judge's Rankings

The distribution of ranks give Year II observations on Subject #13 as shown in Figure 31. The curve shows fewer inflections in the last half and the average is somewhat higher.

Graph Depicting Project Teacher's Evaluations of Behavior Change

The teacher's ratings of this subject's behavior based on the Developmental Sequence of Educational Goals as shown in Figure 32 indicate that the only significant change that occurred during his year in the project was in the mastery of intellectual skills. There was minimal change in attention, response, and order.

Staff Ratings of Changes in Rapport With Adults and Peers

Staff members rated this subject as having made moderate improvement in his relationships with adults (mean rating 4.1) and peers (mean rating 3.8).

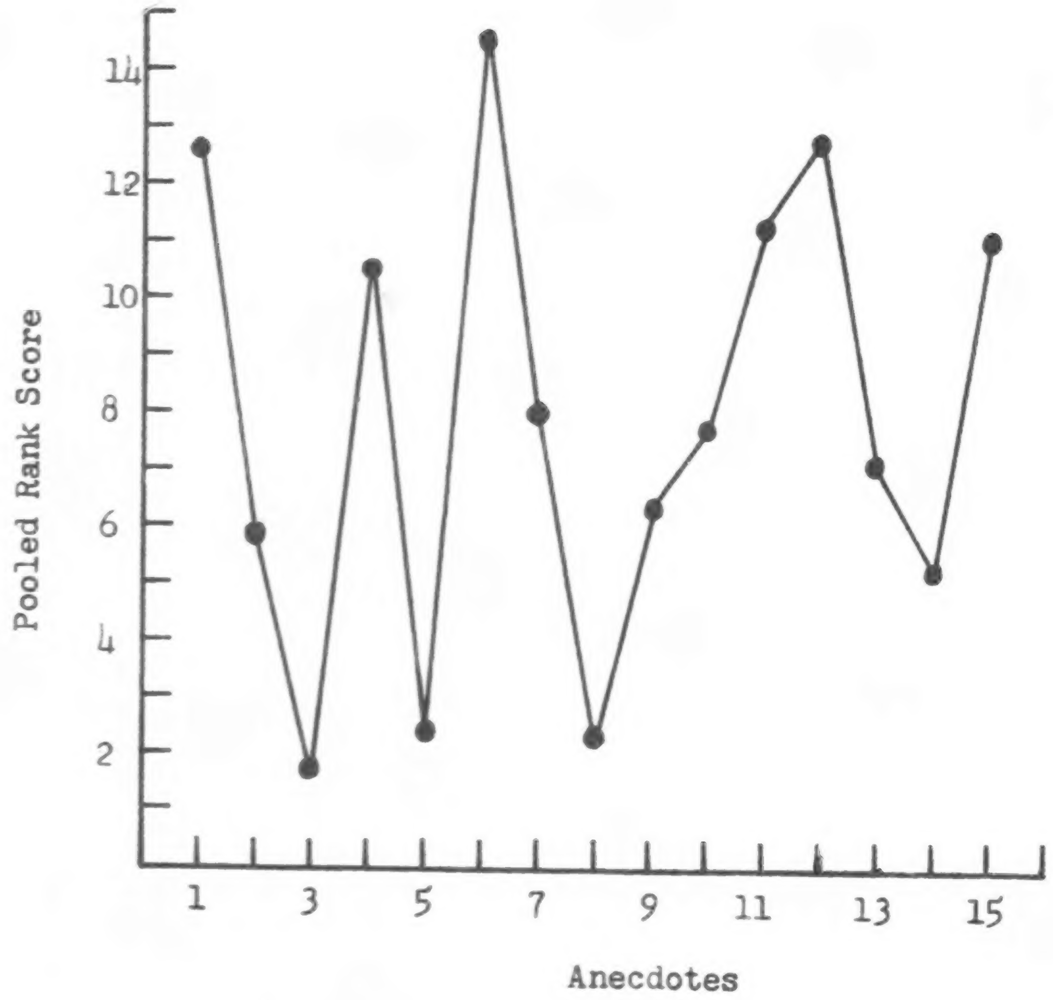


Figure 31. Distribution of ranks assigned to anecdotes.
Subject No. 13.

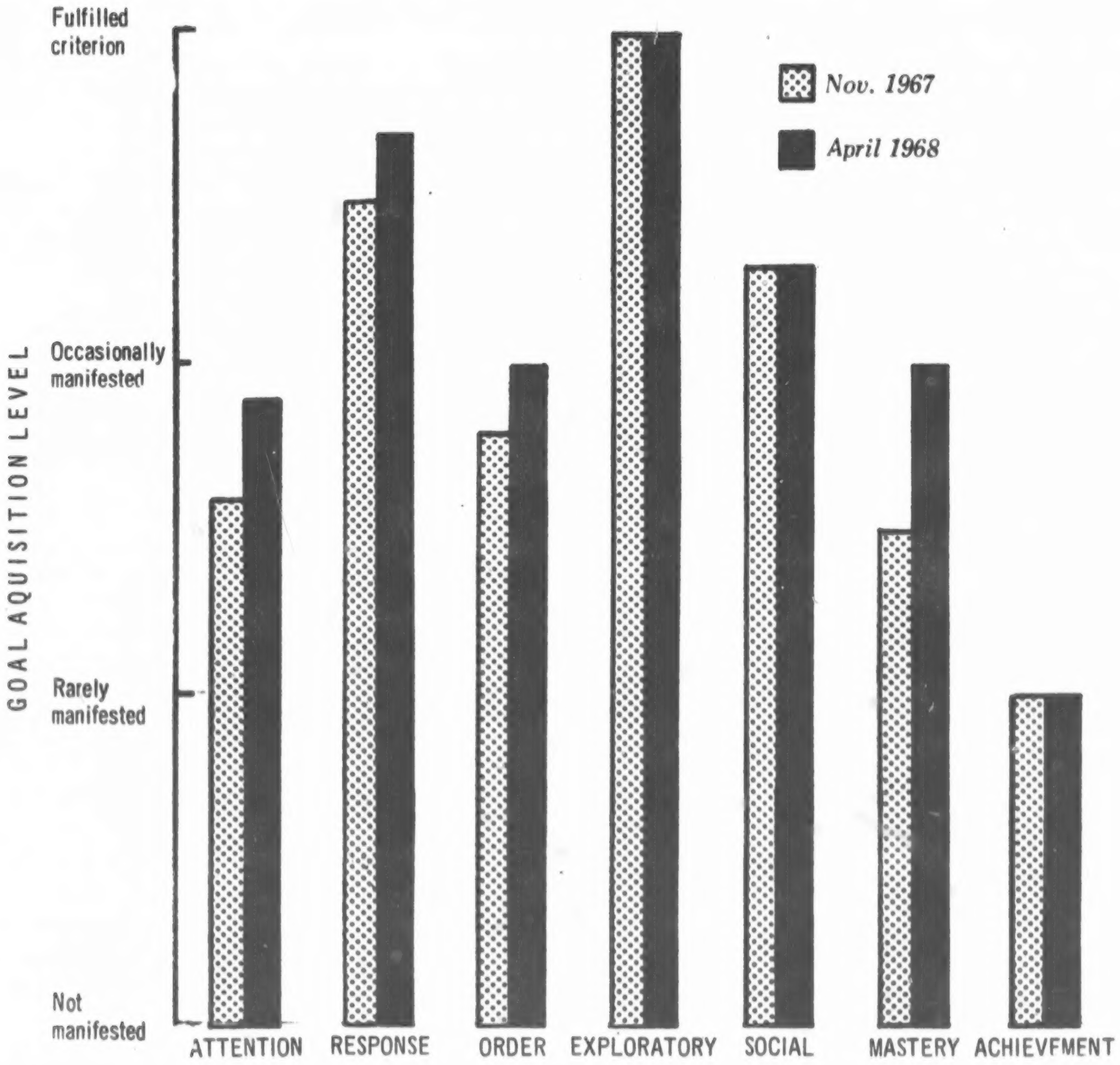


Figure 32 Comparisons of related gains in educational goals for Subject No. 13.

Sample Case History cont'd
Subject #13

Entering Behavior

Subject employed a great deal of acting out behavior in attempting to manipulate situations when he could not have his own way. He was physically aggressive and competitive with peers and adults. This child's fixation on aggressive behavior was manifested in long, detailed, often violent stories about strong men, fights, and incidents that had occurred at home. These were communicated in a mixture of signs and pantomime and were seen as an attention getting device as well as a reflection of his home life. Subject had a very short attention span, was easily distracted, and was resistant to criticism and to adult or peer direction. He was very observant, exceptionally aware, and comprehended all that took place in his environment. He asked detailed questions and was very adept at communicating in vivid detail through the use of pantomime.

Terminal Behavior

Subject was more affectionate with adults and had developed better relationships with his peers. His aggressive behavior although still present, was less extreme. He was able to tolerate group situations in the classroom for longer periods of time. He would often initiate appropriate social contact with peers and adults. The check-card system was effective in modifying his behavior. His attention span had improved and he completed task assignments. His communication was on a more appropriate level although his wild stories of violence were still present.

Current Status

Subject #13 did not enter the day school program in which he was enrolled in Los Angeles until January 20, 1969. He was withdrawn by his parents on May 25. During that time, he was absent a total of seven weeks. This is consistent with his past attendance pattern. His parents constantly move from one place of residence to another to avoid their creditors. During the short time he attended school this year, he is reported to have made a satisfactory adjustment.

SAMPLE CASE HISTORY

Subject #15

Race: White

Birthdate: 8-29-59 Place of birth: Santa Monica, CA

Marital status of parents: separated during first year of project

Father's occupation: postal worker

Mother's occupation: housewife

Siblings: four sisters, b.d. 1947, 1953, 1956, 1962; one brother, b.d. 1950

Onset of deafness: birth Etiology: Rubella

Other deafness in family: none

Educational and/or institutional background

Name	Date Attended
Day class for the deaf	1/64 - 12/65

I. Q. Test scores (Wechsler equivalent)

Date of Test	Score
3/66	93
9/66	93

Psychological Report

Subject #15 was tested in his home as part of a visit to determine his eligibility for enrollment in the Pilot Project for Emotionally Disturbed Deaf youngsters.

During the testing period the Leiter was readministered along with selected Gestalt designs and human figure drawings.

On the Leiter, Subject established his basal age at the five year level. He successfully completed three subtests at the six year level, and one subtest at the seven year level. The resulting I.Q. was 86 which corresponds to an approximate I.Q. of 93 on the WISC and represents low average intellectual functioning.

Subject had difficulty reproducing the simplest of designs, but this problem area was not noted on the block design portions of the Leiter. His human figure drawings suggested gross emotional immaturity and excessive difficulty relating to the environment.

Subject was cooperative, but noncommunicative during the entire testing period. Although he appeared to be calm, excessive anxiety was exhibited in his hesitancy to make corrections.

Subject's parents report that he has been involved in several programs for the deaf without success. His communications skills are limited to simple gestures and he exhibits no language abilities.

It is the feeling of this examiner that Subject may be an emotionally disturbed deaf child of low average intellectual functioning who is educationally retarded. The test results were of a nature which are often attributed to either emotional disturbance or minimal central nervous system pathology.

Psychological Report

Subject #15 was referred for psychological testing by Mr. Robert Lennan to supplement statistical data on this former Pilot Project student.

During the testing period Subject was cooperative and passive but not totally unresponsive. He was familiar with the test procedure and able to proceed independently. He was seldom able to correct errors above the VII year level. However, on the Block Design items he was able to learn from trial and error.

Administration of the Leiter International Performance Scale yielded an I.Q. of 87 which corresponds to a score of 93 on a scale such as the Wechsler. This score ranks at the 33rd Percentile and is classified within the Average Range of intelligence.

Neurological Examination

Date of examination: January 20, 1967

HISTORY: This boy was born on August 29, 1959 following a pregnancy in which his mother had German measles at about six months. She also had a little bleeding a few days before the child was delivered. The delivery followed a seven hour labor which was relatively uneventful and no abnormality at the time of birth was noted. He weighed 6 lbs. 5 oz. and was 21 in. in length. His weight gain and early development were within normal limits. He is right handed, his speech has been retarded and his hearing defect was recognized by the time he was three years of age. He has been examined at the UCLA Medical Center.

Sample Case History cont'd
Subject #15

EXAMINATION - General - The patient is a fairly well-developed, slightly obese 7-year-old white boy in no acute distress. His general physical condition seems fairly good and no gross abnormalities are noted. He is alert and cooperative. His head measures 51 cm. in circumference and is somewhat flattened posteriorly on the right. His posture is somewhat poor and he tends to stand with his abdomen protruding.

NEUROLOGICAL EXAMINATION: Examination of the cranial nerves including vision, visual fields, optic fundi, pupillary responses, and extraocular movements is essentially normal except for hearing which is markedly decreased bilaterally.

Examination of the motor system reveals no abnormality of station or gait. The patient is right handed, his grip is good bilaterally. No gross weakness or paralysis is noted. Cerebellar functions seemed intact. There was no evidence of disease of the spinal cord or peripheral nerves. General sensation seemed normal. The deep reflexes were active and equal, the plantar responses were somewhat equivocal but probably were normal.

IMPRESSION:
1. Bilateral hearing loss, severe
2. No other definite evidence of organic disease of the nervous system

Hearing Loss

	125	250	500	1000	2000	4000	8000
R.E.	65	80	-				
L.E.	65	75	90	90	85	75	60

Reading and Achievement Test Scores

Gates Reading Tests

Date of Test	Word Recognition Grade Level	Sentence Reading Grade Level	Paragraph Reading Grade Level	Average
11/66	No Test			
6/67	1.8	2.27	2.27	2.11

Sample Case History cont'd
Subject #15

Reading and Achievement Test Scores

Stanford Achievement Tests

Date of Test	Word Recognition	Reading Paragraph Meaning	Vocabulary
11/66	No Test		
6/67	1.5	--	--

Gray-Votaw-Rogers General Achievement Tests

Date of Test	Reading		Arithmetic		Educational Grade
	Voc.	Comp.	Reas.	Comp.	
4/67	1.0	1.0	--	--	--

Graph Depicting Project Teacher's Evaluations of Behavior Change

The teacher's ratings of this subject's behavior based on the Developmental Sequence of Educational Goals as shown in Figure 33 indicate that the most significant change that occurred during his year in the project was at the mastery level while minimal changes occurred at the attention and order levels.

Entering Behavior

Subject was extremely timid in his relationships with adults and peers. He appeared to be in a state of confusion much of the time and would sit for long periods of time, his face devoid of expression, until prompted to work. He was reluctant to communicate through the use of fingerspelling and would hold his hand at his side when forming letters. He was a bedwetter.

Terminal Behavior

Subject was more outgoing and engaged in a variety of activities with other children. He carried out assigned tasks and was able to attend to learning activities for extended periods of time. He became highly proficient in fingerspelling and overcame his enuresis.

Current Status

Subject #15 is a residential student in the Lower School at the California School for the Deaf at Riverside. His teacher and the counselors in his dormitory report that he is making slow academic progress a and has adjusted to his new environment. He is less withdrawn and enters into activities with other children.

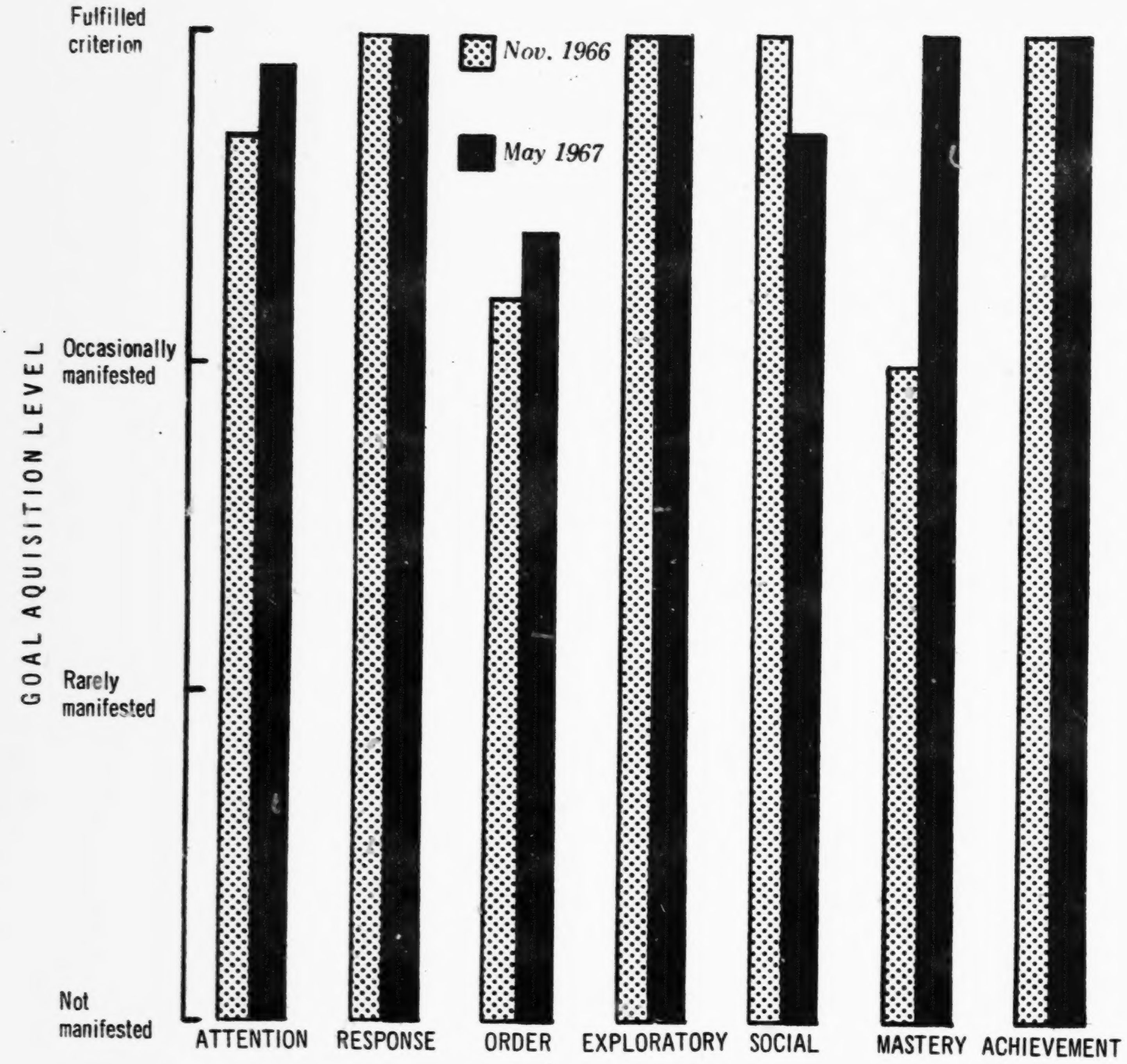


Figure 3 3 Comparisons of related gains in educational goals for Subject No. 15.

SAMPLE CASE HISTORY

Subject #17

Race: White

Birthdate: 11-3-56 Place of birth: Oceanside, CA

Marital status of parents: married

Father's occupation: U. S. Navy (Chief Petty Officer, Hospital Corps)

Mother's occupation: Manager, Coffee Shop

Siblings: two sisters, 1955 and 1959 (birth dates)

Onset of deafness: birth Etiology: unknown

Other deafness in family: None

Educational and/or institutional background

Name	Dates attended
John Tracy Correspondence Course	
Residential School for the Deaf	9/62 - 6/67

I. Q. Test scores (Wechsler equivalent)

Date of Test	Score
10/61	99
5/67	112

Psychological Evaluation

Subject #17 was referred for psychological evaluation in preparation for a staffing where the emotional, social and academic status of this child will be discussed.

At the time of application (10-12-61) Subject was the second of three children. His father, present age 33, completed 2 years of college and is in the armed forces. His mother, also age 33, is a high school graduate. Subject's birth was premature; birth weight was 3 pounds, 8 ounces. Development of psychomotor skills was within normal limits; no defects in addition to hearing impairment have been reported. Audiograms reveal a moderate to severe bilateral loss with gain from amplification. Prior to his admittance to this school (9-12-62) Subject was enrolled for one year at the Poplar Elementary School in Fontana.

Sample Case History cont'd
Subject #17

In regard to Subject's overall behavior, he is a boy who at times is kind and courteous, particularly in new situations, and occasionally is generous to a fault. For the most part, however, he has been described as a boy who continuously resists authority, routine duties, rules and procedures. He accepts overt disciplinary measures, but punishment has little effect on his behavior. He remains loud and aggressive. In play, he prefers companions who are younger than himself.

In regard to the parents, case file information reveals that they have consistently demonstrated a lack of real interest in doing their part to help Subject overcome his problems. They admittedly have been unable to control him since his pre-school years and this is believed to be the one reason for their making application at this school. Repeatedly this school has had to deal quite firmly with the parents in regard to hearing aid purchase and repair, eye examinations, frequency of Subject's visits home, etc.

Medically, it is reported that Subject has had a lifetime history of chronic cough with acute irritation. He is an enuretic child, and as recently as January, 1967, has been administered elavil to help combat this problem. Also, it is presently believed that Subject may be in need of glasses. (Although not a medical problem, it should also be mentioned here that Subject routinely sucks his thumb while sleeping.)

During the present evaluation period the following tests were administered: the Wechsler Performance Scale for Children, the Leiter International Performance Scale, the Raven's Matrices, the Human Figure Drawings, and the Bender Gestalt Test. Throughout the testing periods Subject demonstrated impulsivity, poor attention span, and poor concentration. It was necessary to give him a great deal more attention on direction than is usually necessary for a child of this age.

On the WISC Performance Scale Subject earned an I.Q. of 106 which corresponds to a Percentile Rank of 65 and reflects high Average intellectual functioning within the Bright Normal Range. On this test most difficulty was experienced on Block Design which measures concept formation and the ability to see spatial relationships. Difficulties in this area were not noted during the administration of the Wechsler Test.

On the Raven's Progressive Matrices, Subject earned a score which fell above the 95th Percentile. It is customary for a child of his age to work on this test independently but he was unable to do this. It was necessary to repeatedly ask him to apply himself, and with this pressure he was able to make several corrections and thus earn a very superior score.

Sample Case History cont'd
Subject #17

Human Figure Drawings were of a nature suggesting egocentricity and an extremely poor relationship with the environment. Bender Gestalt responses reflected an expansive, overt, disorganized personality structure. All drawings were within normal limits, but it was noted that occasionally Subject demonstrated a right to left orientation in his approach. There were no reversals.

In summary, Subject #17 is a boy of Bright Normal intelligence who because of his overt and disorganized personality structure has extreme difficulty functioning on an adequate social, emotional or academic level. It is the feeling of this examiner that he is an emotionally disturbed child who will need to make considerable adjustment before adequate growth or functioning within the classroom can be expected.

Neurological Examination

Date of examination: November 17, 1967

CHIEF COMPLAINTS: 1. Deafness
2. Behavior difficulties

HISTORY: Essentially no history is available on this boy except that his birth weight was 4 lbs. 5 oz. No cause for his deafness has apparently been found. He is apparently somewhat of a problem as far as his behavior is concerned.

EXAMINATION - General - The patient is a large slightly obese 13-year-old boy in no acute distress. His general physical condition is good and no gross abnormalities are noted. He is fairly cooperative and seems to understand what is wanted of him fairly easily. He writes well and apparently reads well.

NEUROLOGICAL EXAMINATION: Examination of the cranial nerves reveals no gross abnormalities except as relates to hearing which is markedly decreased. Bone conduction seems to be greater than air conduction bilaterally. The patient can hear tapping on the stethoscope head but cannot hear his own heart. He appears to be right handed.

Examination of the motor system is entirely normal. His grip is good and no weakness or paralysis is noted. The deep reflexes are active and equal. No pathological ones are elicited.

Examination of the sensory system reveals no gross abnormality. This patient's speech is limited and quite garbled but occasional words are identifiable.

Sample Case History cont'd
Subject #17

IMPRESSION: 1. Deafness, type and cause uncertain
2. Behavior problem

No other evidence of neurologic disease is noted.

Hearing Loss

	125	250	500	1000	2000	4000	8000
R.E.	40	45	75	75	95	-	
L.E.	35	45	65	80	80	-	

Reading and Achievement Test Scores

Gates Reading Tests

Date of Test	Word Recognition Grade Level	Sentence Reading Grade Level	Paragraph Reading Grade Level	Average
5/66	2.37	2.64	2.27	2.43
6/67	2.67	2.62	2.3	2.53
4/68	2.78	2.9	2.5	2.73

Stanford Achievement Tests

Date of Test	Word Recognition	Reading Paragraph Meaning	Vocabulary
4/68	2.0	1.8	1.3

Gray-Votaw-Rogers General Achievement Tests

Date of Test	Reading Voc.	Reading Comp.	Arithmetic Reas.	Arithmetic Comp.	Educational Grade
4/68	2.3	2.2	1.6	3.9	2.5

Sample Case History cont'd
Subject #17

Graphic Presentation of Judge's Rankings

The anecdotes taken on Subject #17 are judged to show a generally downward trend in quality. The plot of these is given in Figure 34. Oscillation is quite prominent.

Graph Depicting Project Teacher's Evaluations of Behavior Change

The teacher's ratings of this subject's behavior based on the Developmental Sequence of Educational Goals as shown in Figure 35 indicate that significant change occurred on four of the five readiness levels and in achievement during the year he was enrolled in the project.

Staff Ratings of Changes in Rapport With Adults and Peers

Staff members rated this subject as having made moderate improvement in his relationships with adults (mean rating 3.9) and peers (mean rating 3.9).

Entering Behavior

Subject was indifferent to the opinions or demands of adults. He was rough and aggressive with peers and staff members. He seemed to be preoccupied with provoking his peers through a series of covert aggressive activities. When his actions were reported to adults, he protested his innocence in a highly convincing manner. While he seemed to desire social contact with peers, he had to initiate the contact. It was noted that any contact with peers rapidly developed into a situation where he could do physical harm to the other children. Subject had definite leadership qualities but his malicious behavior with peers caused constant group unrest. When he was involved in a structured situation, he would apply subtle forms of noncompliance. He became motivated by the checkmark system of rewards for appropriate behavior. His primary attention in the classroom was focused on provoking other members of the group. He resisted beginning and completing tasks.

Terminal Behavior

Subject was aware of his inappropriate behavior, but had not overcome his extreme his extreme aggressiveness. He continued to be a disruptive influence in the dormitory. In the classroom his aggressive behavior was generally more controlled. While he continued to offer some resistance to carrying out assigned tasks,he generally completed them.

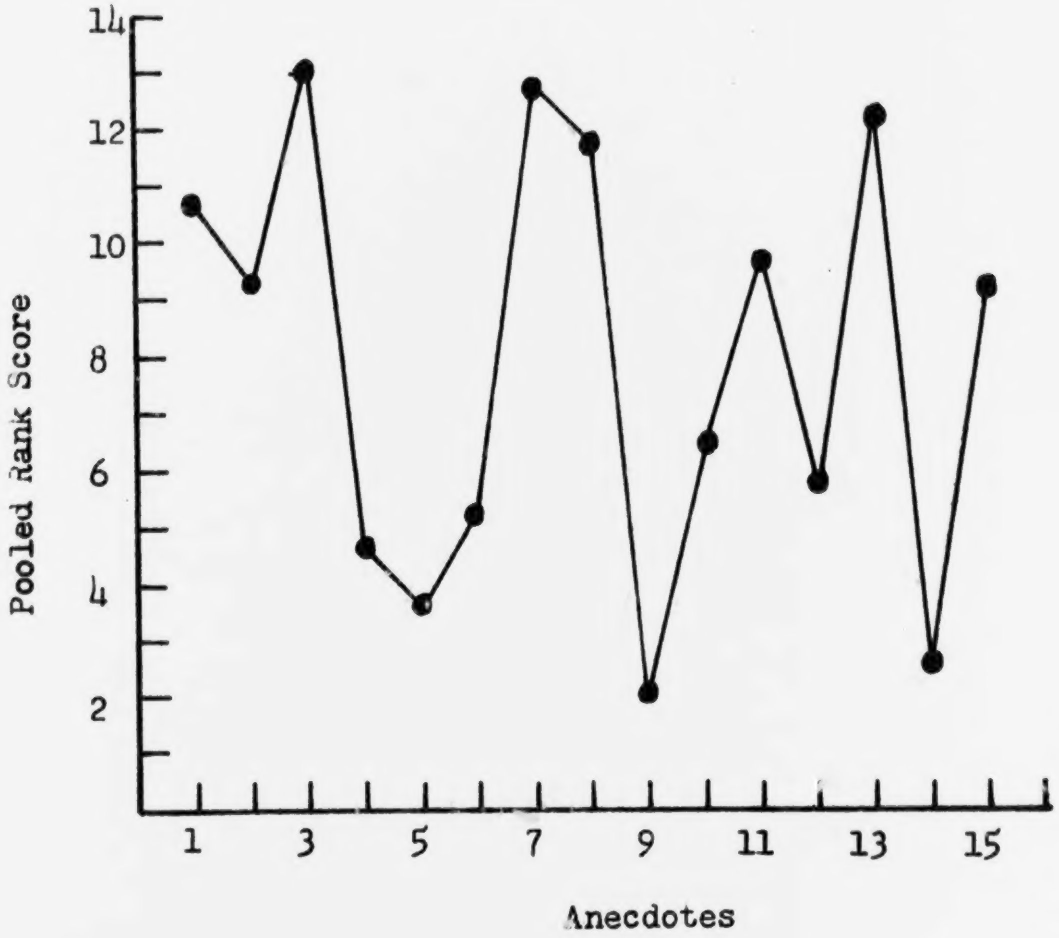


Figure 34. Distribution of ranks assigned to anecdotes.

Subject No. 17.

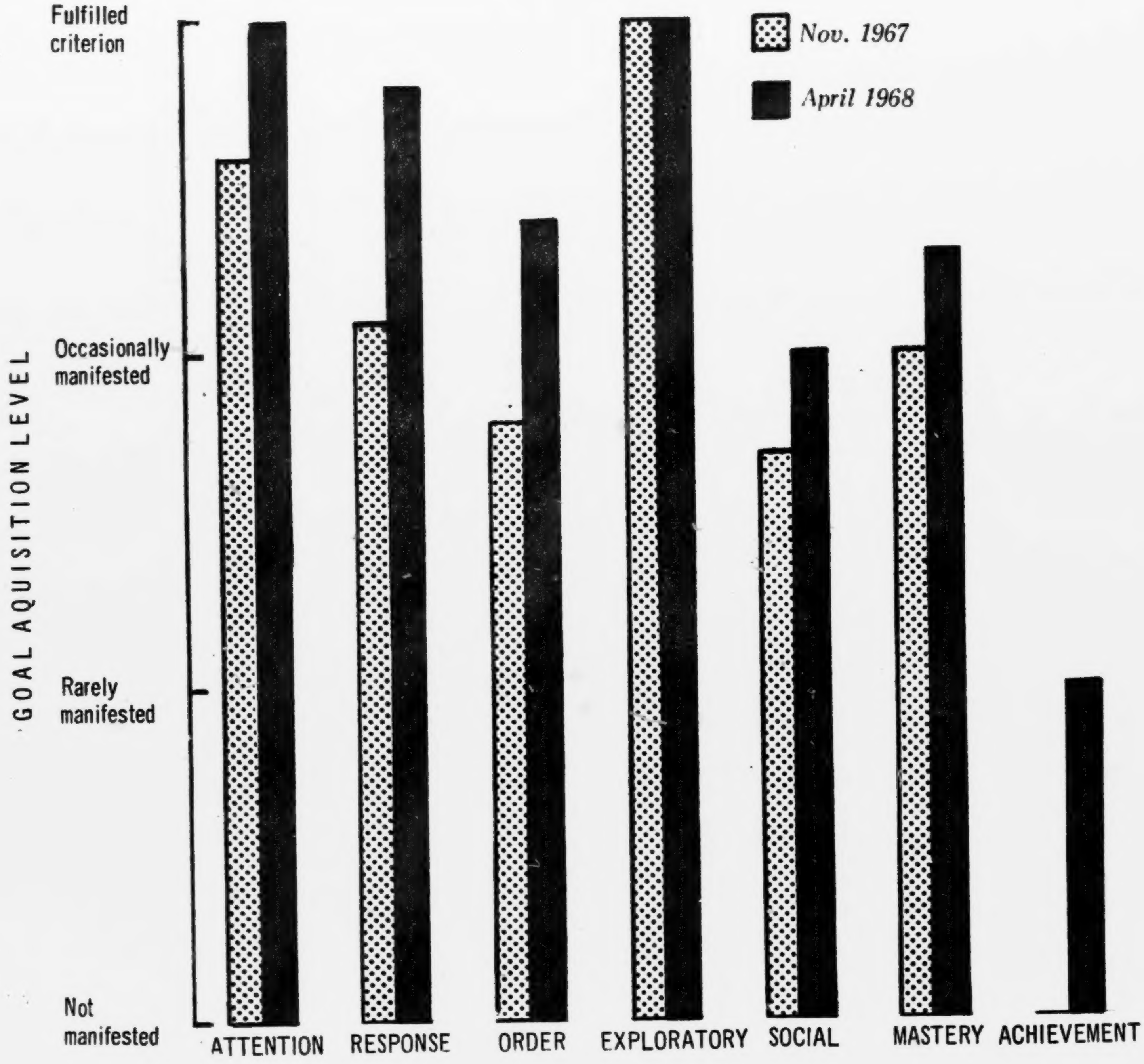


Figure 35. Comparisons of related gains in educational goals for Subject No. 17.

Sample Case History cont'd
Subject #17

Current Status

Subject #17 is currently residing in Japan and no information is available concerning his present educational status.

SAMPLE CASE HISTORY

Subject #18

Race: White

Birthdate: 4-30-54 Place of birth: Whittier, CA

Marital status of parents: Married

Father's occupation: machinist

Mother's occupation: housewife

Siblings: one sister, b.d. 1951; two brothers, b.d. 1955, 1962

Onset of deafness: birth Etiology: unknown

Other deafness in family: none

Educational and/or institutional background

Name	Dates attended
Day Classes for the Deaf	9/59 - 6/62
	9/62 - 6/63
Residential School for the Deaf	9/63 - 11/64
State Hospital for Mentally Ill	4/65 - 6/66

I. Q. Test score (Wechsler equivalent)

Date of Test	Score
11/57	105
3/60	115
3/63	102
3/64	101
9/64	128

Psychological Evaluation

Subject #18 was referred for psychological evaluation by Mrs. Donna Tennis, Supervising Teacher of the Elementary School. The reasons for referral were his apparent lack of academic achievement and severe communication problems.

Subject is one of four children of a machinist and his wife. He has one older sister and two younger brothers. At the present time, the mother is pregnant with her fifth child. Subject was born at Murphy Memorial Hospital in Whittier. He was a full term baby weighing seven pounds, three ounces at birth. The pregnancy and delivery were normal. Doctors have not been able to trace the etiology of deafness. He has had a history of poor coordination and balance. He did not learn to walk until he was eighteen months old. He began feeding himself at four years, dressed himself at six years and learned to tie his shoes at eight years. Toilet training presented a particular problem. It was still not under acceptable control at the age of three. Although he is now ten years old, he continues to wet the bed frequently.

Subject entered the HEAR Foundation at the age of 14 months but was soon transferred to a day nursery. When he was five years old, he was enrolled at the Cresson Street School, and in 1962 he transferred to the Jersey Avenue School. The following background information on him comes from the East Whittier City School District which received it from Dr. Griffiths of the HEAR Foundation.

> "Subject entered the HEAR Foundation at the age of 14 months. His Pediatrician had labeled him as schizophrenic with a possible hearing problem. Dr. Griffiths felt there was an element of rejection throughout this child's history. When he was three months of age, the mother became pregnant again for the third time. Dr. Griffiths felt that the mother was quite unhappy with this early pregnancy. This was manifested by Subject being left in the crib for about four months. When he was seven months old his mother went to work and a neighbor took care of him. He was reputed to have responded to this neighbor until this neighbor also stopped taking care of him in order to go to work. He reacted to this second hypothesized rejection by completely regressing (which may explain his slow motor development). A third rejection has been hypothesized as the father not being able to accept the child's deafness. Dr. Griffiths said also that the only method used by the parents to discipline him was to show him a big stick."

Several psychologists have seen Subject over the past years. As early as 1955, when he was 18 months old he was described by Kathleen Stendel, Clinical Psychologist, as having a comparatively short interest span with interpersonal relationships and appeared somewhat indifferent toward communication of any kind. She rated him as dull normal. Previous psychological evaluations made at this school stated in part that he was "almost schizoid" in his orientation. Last year, Mr. Vernon, psychologist at CSDR, reported that an examination of Subject's medical records by Dr. Wills raised the possibility of a chronic brain syndrome, but the data was too inconclusive to permit a definite diagnosis. Results of previous psychological testings are as follows:

Sample Case History cont'd
Subject #18

	Test	Date	I.Q.
1.	Leiter	11-23-57	105
2.	Binet (Performance items)	11-23-57	98
3.	Leiter	1960	113 (The examiner felt that this score was well below his true potential.)
4.	Leiter	3-13-63	108
5.	Wechsler Performance Scale for Children	3-3-64	101
6.	Raven's Matrices	3-3-64	Percentile of 95-plus

Since Subject's enrollment at this school in September, 1963, his behavior has been characterized by extreme withdrawal from people. This is manifested in almost complete rejection of communication devices. He does not use speech, fingerspelling or speechreading, and he rejects most attempts to teach him to read or write. In academic areas not involving a great deal of language (i.e. arithmetic computation) he expresses considerable interest and ability. He will not make eye contact with adults and only occasionally with other children. He does use, however, isolated signs to make known a specific need. He plays alone and has no friends. During his first months at this school he insisted on running everywhere. If frustrated in his attempts to do as he wished, he became upset and would react by striking out at those nearest to him or by moaning or whimpering for long periods of time. He was easily upset by crowds of people. When he found himself surrounded by others, he reacted by violently hitting and kicking those closest to him. This year he has shown some improvement in his overall behavior. Although he continues to dislike crowds, he now tends to be much less violent. He has continued to remain aloof and noncommunicative. He has never been observed having a spontaneous conversation with anyone.

Due to Subject's extreme difficulty with interpersonal relationships it was decided by the examiner to bring him to the Play Therapy room in an initial attempt to establish rapport before the actual psychological tests were administered. During that time he played completely alone. He did not look at the examiner. On three occasions an attempt was made to gain his attention. He did not respond either by looking up or by pulling away. When it was time for him to leave, he walked far ahead of the examiner. He did not respond to a wave goodbye.

During the actual evaluation period the following tests were administered; the WISC Performance Scale, the Raven's Progressive Matrices, the Bender Visual Motor Gestalt Test and the Human Figure drawings. The

Sample Case History cont'd
Subject #18

WISC Performance Scale yielded a pro-rated I.Q. of 128 which provides him with a percentile rank of 97 and places him at the upper margin of the superior range of intelligence. The subtest which measures special awareness and the ability to recognize the logical sequence of happenings was not administered. When this subtest was demonstrated, Subject pushed the materials away and refused to take interest in the activity. This is the only Performance subtest involving social interaction. Analysis of the remaining subtests indicate superior ability to abstract and to see configurations. On the block designs he worked with extreme accuracy and speed. During the entire evaluation period Subject worked very hard. He continually moved to the examiner's side of the table to check his time. It obviously pleased and motivated him. He moaned excitedly throughout the period and worked each succeeding task with added fervor. He did not look at the examiner. He did, however, watch the examiner's hands and the test demonstrations.

On the Ravens Matrices, Subject received a percentile Rank of 95-plus which is as high as this scale goes. He was visibly motivated by the test and completed it with extraordinary rapidity. The Bender Gestalt test indicated an extremely rigid personality structure but no visual-motor involvement was indicated. The human figure drawings were extremely primitive. Both were drawn without lifting the pencil from the paper. Only one, the drawing of the boy, could be recognized as a person. He drew the figures in great haste and quickly pushed the papers away from him.

Diagnostically, Subject does not seem to fit into any of the conventional psychiatric classifications. There are many indications of autism, including his refusal to look at people, his withdrawal, and his immature behavior patterns. Yet the fact that he does make certain needs known and has related to others through aggression tends to nullify a diagnosis of autism. It is felt by the examiner that Subject is a severely disturbed child whose problem is probably chronic in nature stemming from excessive rejection of an overprotective mother and a father who cannot accept his deafness.

Subject's academic records indicate that his emotional disturbance has placed extensive limitations on his ability to achieve in the classroom. Although he has shown some improvement socially, it is doubtful that measurable academic growth will be observed unless a long range therapy plan is instigated. It is understood by this examiner that the appropriate type of psychological help needed by Subject may be offered both on the U.C.L.A. Campus and at Mt. Sinai Hospital in Los Angeles. It is suggested that these and other possibilities be explored in order to make the best recommendation for Subject's future.

Sample Case History cont'd
Subject #18

NEUROLOGICAL EXAMINATION

Date of examination: January 13, 1967

HISTORY: This 12-year-old boy was born at the end of what was apparently a normal pregnancy. His birth weight was 7 lbs. 3 oz. No difficulties in the neonatal period were noted. His early development was apparently normal except that he did not walk until he was 18 months. He was said to have had some difficulty sitting or standing at this age but has apparently outgrown this difficulty. His first tooth appeared at 8 1/2 months. He has had no serious illnesses, injuries, or operations. He has been examined at the Los Angeles Neurological Institute where no obvious evidence of organic disease of the nervous system was found. He has had three electroencephalograms, one at the White Memorial Hospital, one at UCLA Medical Center, and the most recent one at Pacific State Hospital. No definite abnormality was noted in the previous tracings.

EXAMINATION - General - The patient is a well-developed, well-nourished 12-year-old white boy in no acute distress. His general physical condition seems good and no gross abnormalities are noted.

NEUROLOGICAL EXAMINATION: Examination of the cranial nerves including vision, visual fields, optic fundi, pupillary responses, etc. is essentially normal. The retina is noted to be somewhat thin with the choroid showing through in a somewhat striped manor. The discs appear normal.

Examination of the patient's hearing reveals him to have essentially no auditory acuity.

Examination of the motor system reveals no abnormality of station or gait. The patient's grip is good bilaterally. No gross weakness or paralysis is noted. Cerebellar functions are intact.

Examination of the sensory system reveals no abnormalities. There is no evidence of disease of the spinal cord or peripheral nerves.

IMPRESSION:
1. Perceptive deafness, essentially complete
2. Possible emotional difficulties by history
3. No obvious evidence of organic disease of the nervous system

Hearing Loss

	125	250	500	1000	2000	4000	8000
R.E.		No Response					
L.E.				No Response			

Sample Case History cont'd
Subject #18

Reading and Achievement Test Scores

Gates Reading Tests

Date of Test	Word Recognition Grade Level	Sentence Reading Grade Level	Paragraph Reading Grade Level	Average
11/66	2.67	3.6	2.1	2.8
6/67	2.77	2.86	2.5	2.7

Stanford Achievement Tests

Date of Test	Word Recognition	Reading Paragraph Meaning	Vocabulary
11/66	1.9	1.4	1.5
6/67	2.0	1.4	1.4

Gray-Votaw-Rogers General Achievement Tests

Date	Reading		Arithmetic		Educational
of Test	Voc.	Comp.	Reas.	Comp.	Grade
6/67	1.4	2.1	2.2	5.9	2.9

Graph Depicting Project Teacher's Evaluations of Behavior Change

The teacher's ratings of this subject's behavior based on the Developmental Sequence of Educational Goals as shown in Figure 36 indicate that significant change occurred on all of the readiness levels and in the mastery of intellectual skills.

Entering Behavior

Subject was extremely withdrawn and hyperactive. He actively resisted communicating with others. When he wanted something from an adult, he would pull the adult by the sleeve to the thing he wanted and then point to it to indicate his desire. He had little or no eye contact. He could not tolerate group activities or losing at games in a one to one situation. If it became evident that he were losing a game of checkers or cards, he would pick up the game board or cards and throw it across the room and then beat a hasty retreat. He became very agitated if there were a disturbance near him. Although he did not participate in activities, it was noted that he was very aware of all that happened.

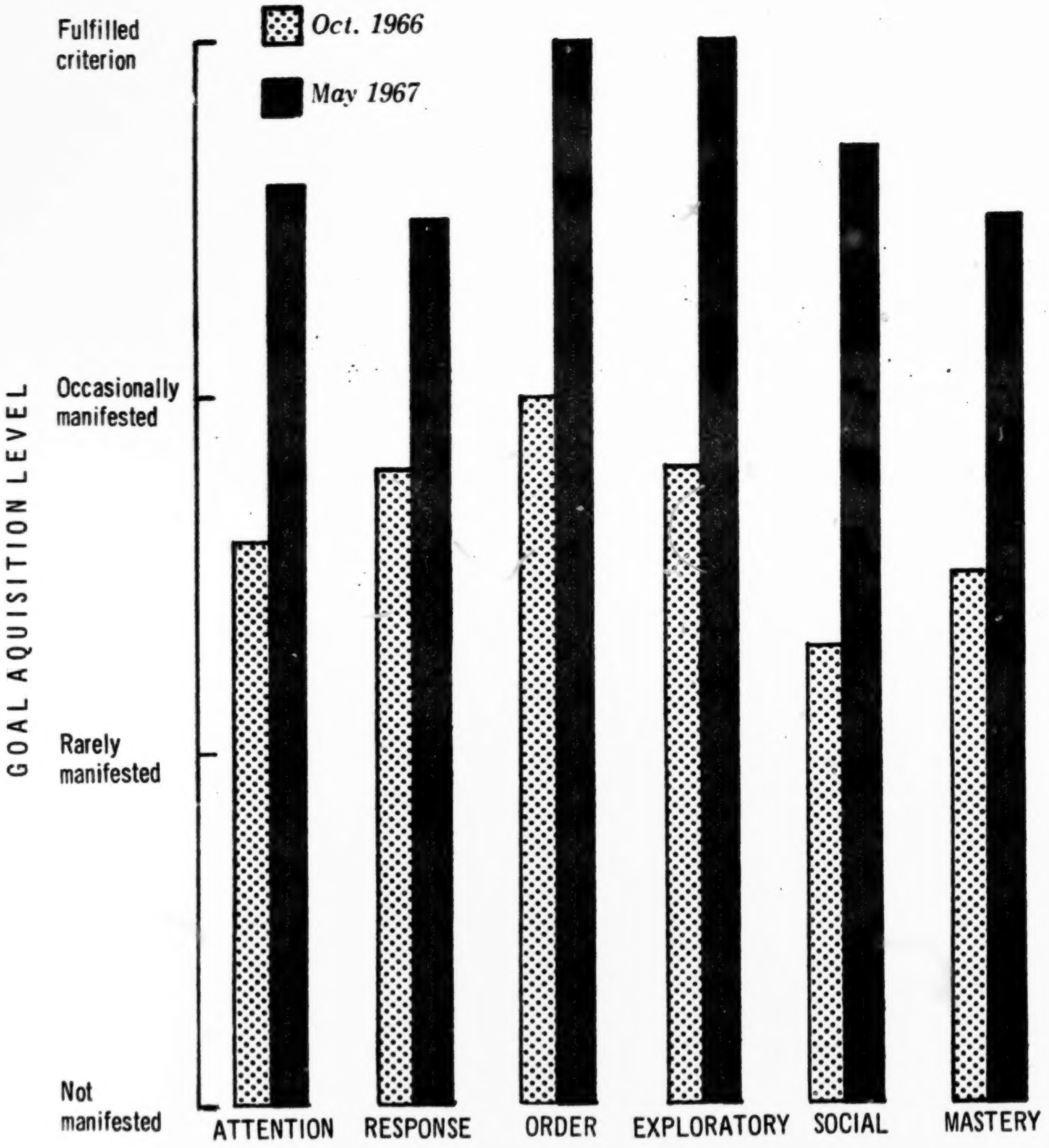


Figure 36. Comparisons of related gains in educational goals for Subject No. 18.

Sample Case History cont'd
Subject #18

Subject was easily upset and would often work up to tantrums that lasted for long periods of time. During these tantrums, it required the constant attention of one staff member to isolate him from the group. He frequently bit other boys for no apparent reason. He was very affectionate with some adults when he chose to be and sought their affection on occasion.

Terminal Behavior

Subject was able to maintain eye contact and his communication improved through sign language, fingerspelling, and writing. He seemed to enjoy playing games with the dormitory counselors and his peers and was able to tolerate losing. He made tentative attempts to involve himself in group activities but would withdraw if he perceived them to be threatening. He no longer bit other children.

Current Status

Subject #18 died during the summer of 1967 as a result of acute nephritis.

SAMPLE CASE HISTORY

Subject #20

Race: White

Birthdate: 4-15-58 Place of birth: Vancouver, Washington

Marital status of parents: Divorced

Father's occupation: Hospital kitchen worker

Mother's occupation: Unknown

Siblings: one half-brother, two half-sisters, no birth dates available

Onset of deafness: 3 years Etiology: Measles

Other deafness in family: maternal aunt, maternal uncle, paternal aunt

Educational and/or institutional background

Name	Dates attended
Residential School for the Deaf	2/66 - 3/66
Residential School for the Deaf	9/66 - 1/67
Day School for the Deaf	9/67 - 10/67
Day School for the Deaf	9/68 - Present

I. Q. Test scores (Wechsler equvvalent)

Date of Test	Score
10/67	82
5/68	94

Psychological Evaluation

Subject #20 was referred for psychological evaluation by Mr. Robert Lennan, Supervising Teacher of the Pilot Project as part of routine re-evaluation procedure for all Pilot Project participants.

Subject is one of four children of divorced parents. He is in the custody of his father who is employed as a hospital kitchen worker. On the application for admission to this school, it is indicated that he was not born deaf but had lost his hearing at age three as a result of measles. It is also indicated, however, that Subject's mother has a brother and a sister who are deaf and that his father has an aunt who is deaf.

Sample Case History cont'd
Subject #20

Subject was first seen by this examiner in October, 1967, just prior to his admission to the Pilot Project Program. At that time, the Leiter International Performance Scale was administered yielding an I.Q. of 74. This score corresponds to the Wechsler score of approximately 82 and reflects Dull Normal intellectual functioning. On the Raven's Matrices which was also administered at that time, Subject earned a Percentile of 40 which falls within the Low Average Range.

The progress reports submitted by Subject's classroom teacher at the close of the 1967-68 school year included the following comments in regard to his behavior:

> "Subject does not pay attention. His attention span is very short. He is very mobile and needs constant reminding to sit down. He daydreams and dawdles over his work. He refuses to work and is easily distracted. He is easily upset which ends in real hollering temper tantrums. These have lessened but occur at least once a week or more. He is tolerated by the other boys and accepted by only one.
>
> He tries to get out of work by showing affection. His affection is sometimes real, but often an act. He needs immediate rewards. He has not learned the classroom limits nor the limits of his teachers. He has learned some limits of the other boys."

During the present evaluation period the Leiter International Performance Scale was once again administered to Subject. During this testing period he earned an I.Q. of 88 which corresponds to a Wechsler score of approximately 94 and reflects at least Average Intellectual potential. When asked to accompany the examiner into the testing room Subject became extremely silly. However, once he was presented with the testing materials he appeared to apply himself to the task. It was noticed that he had extreme difficulty manipulating the materials and seemed to become easily confused when presented with more than one block at a time. It was apparent that he lacked organization of thought and did not know how to plan an approach to a task.

Subject is a little boy who requires a great deal of attention and continuously demands to have his own way. Changes of any kind are difficult for him to accept and tolerate. He is described as being very immature for his age. It is the strong feeling of this examiner that Subject is in need of continued enrollment in an academic classroom where his special learning and psychological problems can be worked with through special methods. It is doubtful at this time that he could fit successfully into a regular classroom situation for normal deaf children.

Sample Case History cont'd
Subject #20

NEUROLOGICAL EXAMINATION

Date of examination: November 17, 1967

CHIEF COMPLAINT:
1. Deafness
2. Behavior difficulties

HISTORY: Essentially no history is available on this patient. His birth is said to have been normal and he has had no serious illnesses. He has apparently been a behavior problem. No cause for his deafness is known. He has had two surgical procedures, an appendectomy and the repair of a right inguinal hernia.

EXAMINATION - General - The patient is a fairly well-developed, somewhat thin 8-year-old boy in no acute distress. He was quite uncooperative during the examination, becoming frustrated and irritated easily, but did cooperate to a certain degree. His general physical condition is good and no gross abnormalities were noted.

NEUROLOGICAL EXAMINATION: Examination of the cranial nerves including vision, visual fields, optic fundi, pupillary responses, extraocular movements, etc. is essentially normal though cooperation was not ideal in the testing procedures. The patient's hearing is markedly decreased but with the stethoscope in his ears he could hear tapping on the chest piece, apparently in both ears. He may have had some bone conduction but no air conduction, however, the bone conduction may have been actually the perceptive of vibration rather than a tone.

Examination of the motor system reveals the patient to be right handed. He is able to write his name or rather print it, however, the last name he could not do without referring to the name on his chart. No gross weakness or paralysis was noted. The deep reflexes were hypoactive but equal. The plantar responses were normal.

Examination of the sensory system reveals no obvious deficits. Cerebellar functions were intact.

IMPRESSION:
1. Deafness, type undetermined
2. Behavior difficulties with easy frustration, short attention span, etc.
3. No other objective evidence of disease of the nervous system.

Sample Case History cont'd
Subject #20

Hearing Loss

	125	250	500	1000	2000	4000	8000
R.E.	NT	65	75	95	100	-	
L.E.	NT	80	100	-			

Reading and Achievement Test Scores

Gates Reading Tests

Date of Test	Word Recognition Grade Level	Sentence Reading Grade Level	Paragraph Reading Grade Level	Average
11/67	0	0	0	
4/68	2.0	1.5	1.55	1.7

Stanford Achievement Tests

Date of Test	Word Recognition	Reading Paragraph Meaning	Vocabulary
4/68	1.1	1.5	1.3

Gray-Votaw-Rogers General Achievement Tests

Date	Reading		Arithmetic		Educational
of Test	Voc.	Comp.	Reas.	Comp.	Grade
4/68	1.2	1.3	3	2	1.2

Graphic Presentation of Judge's Rankings

Subject #20 was a late-comer to the project. Seven of the eight observations taken on him were done in the last spring of the second year. The graph shown in Figure 37 is too brief to be of interpretive value other than to state that he improved over his first episode.

Graph Depicting Project Teacher's Evaluation of Behavior Change

The teacher's ratings of this subject's behavior based on the Developmental Sequence of Educational Goals as shown in Figure 38 indicate that marked changes occurred on four of the five readiness levels and in the mastery of intellectual skills during the year he was enrolled in the

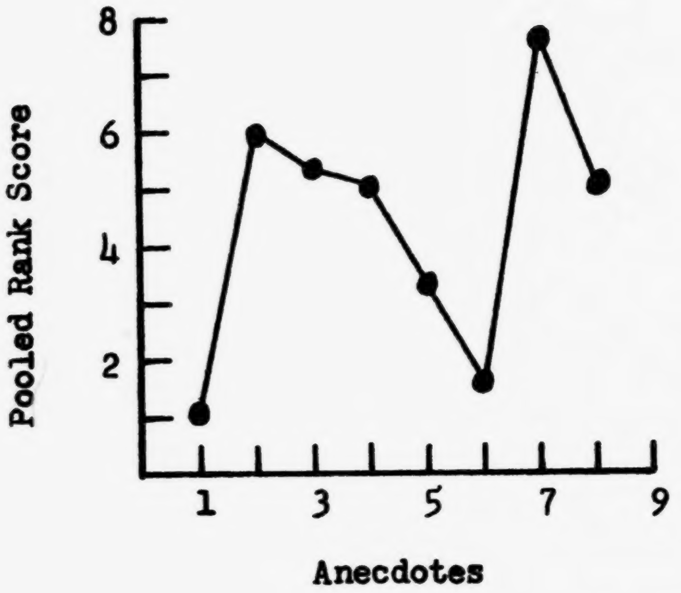


Figure 37. Distribution of ranks assigned to anecdotes. Subject No. 20.

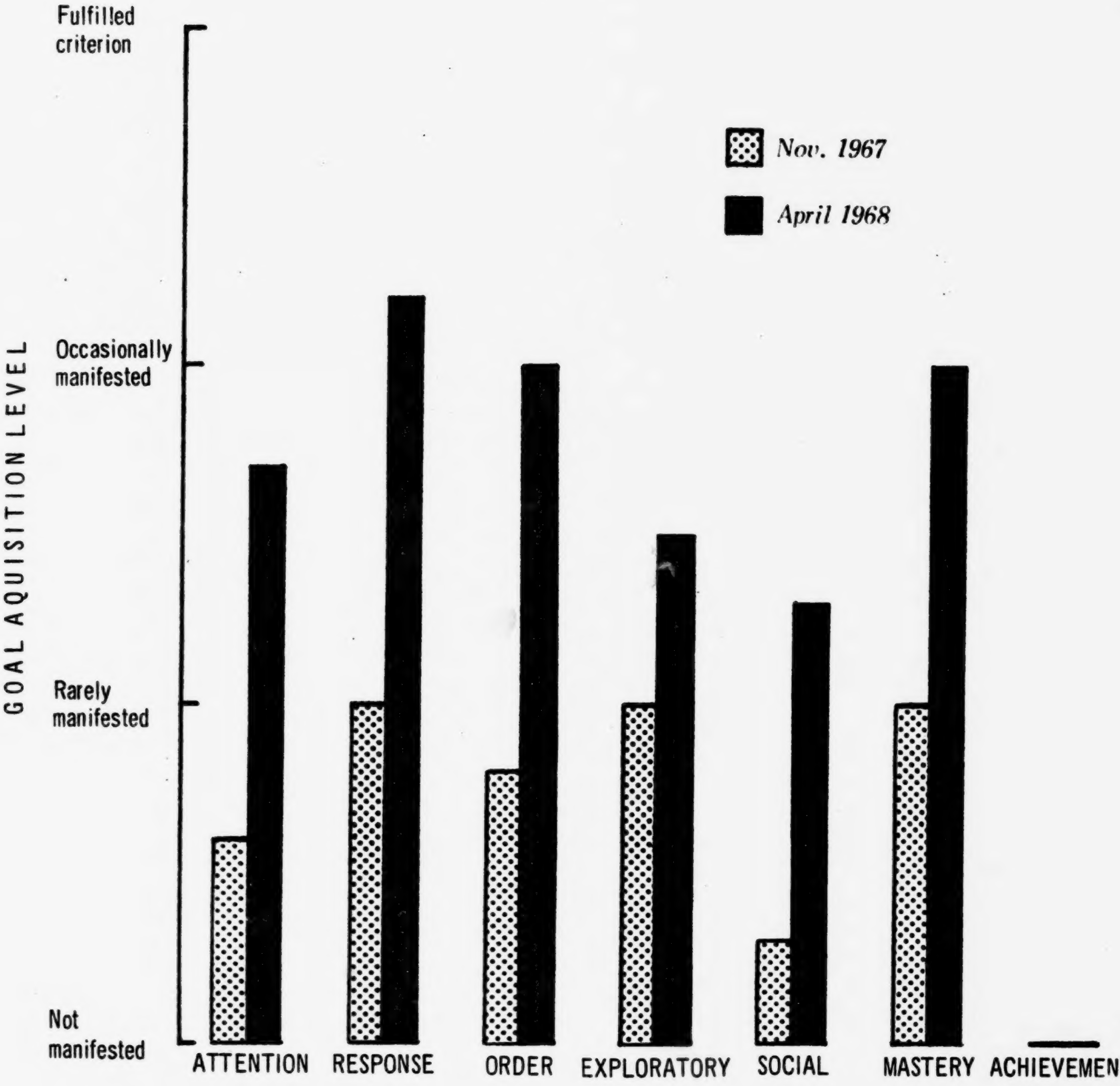


Figure 38. Comparisons of related gains in educational goals for Subject No. 20.

project. He continued to require extrinsic motivation for the performance of tasks at the end of the year.

Staff Ratings of Changes in Rapport With Adults and Peers

Staff members rated this subject as having made moderate improvement in his relationships with adults (mean rating 3.9) and peers (mean rating 3.8).

Entering Behavior

Subject was extremely hyperactive and had frequent, prolonged temper tantrums. When angry or frustrated, he made definite attempts to hurt himself or others. He demanded adult attention and was unable to function in a group situation unless he was the center of attention. This attention was effective in controlling his behavior for short periods of time. The checkcard was ineffective in controlling the subject's behavior initially because he was not reinforced by the rewards being used with the other children. When appropriate reinforcers (i.e. swimming) were identified the checkcard system became more effective. He also responded to candy rewards on a fixed ratio reinforcement schedule. His attention span was extremely short. He resisted beginning and completing assigned tasks.

Subject was unable to establish relationships with peers. Although he appeared to desire social contact with them, his methods of achieving it only served to alienate others. He frequently attacked other children. When they retaliated, he ran to staff members screaming for protection.

Terminal Behavior

Subject's temper tantrums were somewhat less frequent and less violent. He responded to reasoning at times. He was able to tolerate sharing adult attention in group situations. Assigned tasks were initiated and completed with less resistance.

He had achieved limited social relationships with peers and exhibited less aggressive behavior.

Current Status

Subject #20 is enrolled in a day school for the deaf in Los Angeles on a limited day schedule. He has failed to make academic progress because of his continuing emotional problems.

SAMPLE CASE HISTORY

Subject #21

Race: White

Birthdate: 7-25-60 Place of birth: Van Nuys, CA

Marital status of parents: Married

Father's occupation: Plumber

Mother's occupation: Housewife

Siblings: one sister, 1957

Onset of deafness: birth Etiology: Rubella

Other deafness in family: None

Educational and/or institutional background

Name	Dates attended
Tracy Correspondence Course	
HEAR Foundation (5 years)	
Parochial Nursery School	Spring '65 - 1/66
Private Nursery School	2/66 - 6/66
Day School for the Deaf	9/66 - 6/67

I. Q. Test scores (Wechsler equivalent)

Date of Test	Score
7/67	90
6/68	91

Psychological Evaluation

Subject #21 was evaluated in his home by this examiner in an effort to determine his eligibility for enrollment in the Pilot Project for emotionally disturbed deaf boys at this school.

Subject was very cooperative throughout the testing period but his performance was very much inhibited by his gross impulsiveness, his rambunctious approach to the test tasks, and his apparent poor concentration ability. There were no successful efforts at speech, although there was a great deal of vocalizing with the mouth remaining in a closed position. These sounds resembled short repeated moans and were frequently punctuated by tongue clicks and glottal pops for which the mouth opened momentarily.

On the Raven's Matrices Subject established his Basal Age at the V Year Level. He successfully completed only one subtest at each the VI, VII, VIII, and IX Year Levels. His I.Q. was determined to be at least 84 which corresponds to a Wechsler I.Q. of approximately 90 and reflects low average intellectual functioning.

On the Raven's Matrices Subject was able to only successfully complete the most simple of the test items. Not only did he seem to lack sufficient concentration ability but he did not appear to truly understand how to approach the more difficult items. His score on this test fell below the fifth percentile, far below the 25th percentile earned on the Leiter Performance Scale, and suggests the possibility that the Raven's Score is not truly representative of this boy's ability.

Human Figure Drawings were primitive and grossly immature. With the exception of the heads, the figures could not be recognized as representing human beings.

Bender Gestalt responses equally primitive, but they were identifiable. Both the Human Figure Drawings and the Bender Gestalt drawings were done in a hasty manner with no attention given to detail.

Current test results indicate that this boy may either suffer from severe emotional maladjustment or moderate brain damage, or from both. In discussing these impressions with the parents, they indicated that they had received diagnoses of similar nature before. They also indicated, however, that the boy had been administered an EEG and that the results were negative.

It is the feeling of this examiner that before we can consider this boy for admission to the Pilot Project, we should, if possible, have him examined by our medical consultants at Loma Linda University. If this cannot be arranged, perhaps his previous EEG reading can be sent to Loma Linda hospital for evaluation.

If brain damage does not appear to be present, this boy would be an excellent candidate for the Pilot Project.

NEUROLOGICAL EXAMINATION

Date of examination: August 25, 1967

CHIEF COMPLAINT: Deafness and some behavior problems

PAST HISTORY: This patient's father and mother are living and well. There is an older sister ten years of age also in good health. The patient is the second of the two children born after a normal pregnancy by caesarean section. No abnormalities were noted at that time and the patient appeared to have a normal infancy. His only illnesses have been chicken pox and measles. His operations include a tonsillectomy at four years of age because of frequent tonsillitis and some procedure on the right upper lid for ptosis when he was five years of age. He has had no serious injuries. His appetite is only fair, he is somewhat of a fussy eater and his diet is probably low on vegetables, salads, and fruits. He sleeps well. This boy has been on Proloid and on Dilantin 50 mg. daily. He also has been given vitamins.

HISTORY OF THE PRESENT ILLNESS: This patient was slow to sit up. He was seen by Dr. Margaret Jones at UCLA for the period between the ages of 1 1/2 and 2 1/2 years. The parents noted that he did not respond to noises and when difficulties were suspected, testing showed a marked loss of hearing. He was given bilateral hearing aids at two years and seven months of age. His balance had been poor up to this time and improved almost immediately. He went to Hearing Foundation twice a week for four and a half years but little or no speech was developed. He was on the Delcato system for about four months. He has had three or four electroencephalograms, the first ones showing dysrhythmia with 14 and 6 frequencies and the last one being within normal limits. He is somewhat hyperactive but is not a serious behavior problem. With his hearing aids in place, he responds to his name, he may lip read a little but he has no vocabulary as far as expressive speech is concerned. He went to a parochial nursery school for eighteen months where he did quite well. He went to a private kindergarten for about four months where he had some difficulty. He was also in public school in a special class for the deaf for one year and during this time made definite progress.

SYSTEM REVIEW: This patient has no complaints referable to his vision, he has not apparently had vertigo or headaches. He has no complaints referable to the nose and throat or heart and lungs. His gastrointestinal and genitourinary systems cause no difficulties.

EXAMINATION - General - The patient is a fairly well-developed, fairly well-nourished 7-year-old boy in no acute distress. His general physical condition is good and no obvious abnormalities are noted.

NEUROLOGICAL EXAMINATION: Examination of the cranial nerves including vision, visual fields, optic fundi, pupillary responses, and extraocular movements is essentially normal except as relates to his auditory acuity which is markedly depressed bilaterally.

Sample Case History cont'd
Subject #21

Examination of the motor system reveals no serious abnormality of station or gait. The patient is probably right handed though some question exists. His grip is fairly good bilaterally. No gross weakness or paralysis is noted. Cerebellar functions are intact. The deep reflexes are active and equal and no pathological ones are elicited.

Examination of the sensory system is difficult but no obvious defect is noted. There is no suggestion of disease of the spinal cord or peripheral nerves .

IMPRESSION: Bilateral deafness of moderately severe degree
Retarded speech development
No other obvious evidence of neurologic disease

DISCUSSION: It is not possible to state absolutely that this boy does not have some aphasia as well as his hearing difficulties though it is not the impression of the examiner that this is true.

Hearing Loss

	125	250	500	1000	2000	4000	8000
R.E.		No Response					
L.E.				No Response			

Reading and Achievement Test Scores

Gates Reading Tests

Date of Test	Word Recognition Grade Level	Sentence Reading Grade Level	Paragraph Reading Grade Level	Average
4/68	1.95	1.4	1.5	1.61

Stanford Achievement Tests

Date of Test	Word Recognition	Reading Paragraph Meaning	Vocabulary
4/68	1.1	1.5	1.3

Gray-Votaw-Rogers General Achievement Tests

Date	Reading		Arithmetic		Educational
of Test	Voc.	Comp.	Reas.	Comp.	Grade
4/68	2	6	3	1	1.2

Sample Case History cont'd
Subject #21

Graphic Presentation of Judge's Rankings

The distribution of ranks given one year of anecdotes on Subject #21 are presented in Figure 39. A substitute teacher was present the day observation 13 was taken as indicated by the dashed line. In general, this boy's behavior was judged to improve across the year. That is, through the variability a slightly positive slope is discernable.

Graph Depicting Project Teacher's Evaluations of Behavior Change

The teacher's ratings of this subject's behavior based on the Developmental Sequence of Educational Goals as shown in Figure 40 indicate that marked changes occurred on all of the readiness levels and in the mastery of intellectual skills. Extrinsic motivation for the performance of tasks was still necessary at the end of the year.

Staff Ratings of Changes in Rapport With Adults and Peers

Staff members rated this subject as having made moderate improvement in his relationships with adults (mean rating 4.2) and peers (mean rating 4.2).

Entering Behavior

Subject was hyperactive and could not tolerate group situations that were not of his own choosing. He was able to induce vomiting in a stressful situation and often resorted to this as an escape mechanism. He sought social contact with the less aggressive boys in the project on occasion but most of his social activities were concentrated in seeking and demanding adult attention. Subject was seemingly unable to assume responsibility for self-care but this was seen as a ruse to gain adult attention. His aggressive behavior with peers was restricted to teasing and he was unable to cope with retaliation by them.

Terminal Behavior

Hyperactivity was markedly reduced and Subject was able to function in group situations but did not form any real friendships. He was able to work independently for long periods of time on assigned tasks. He continued to seek adult assistance for self-care tasks.

Current Status

Subject #21 is enrolled in a day class for the deaf and is reported to have adjusted to the classroom routine. He is making satisfactory academic progress.

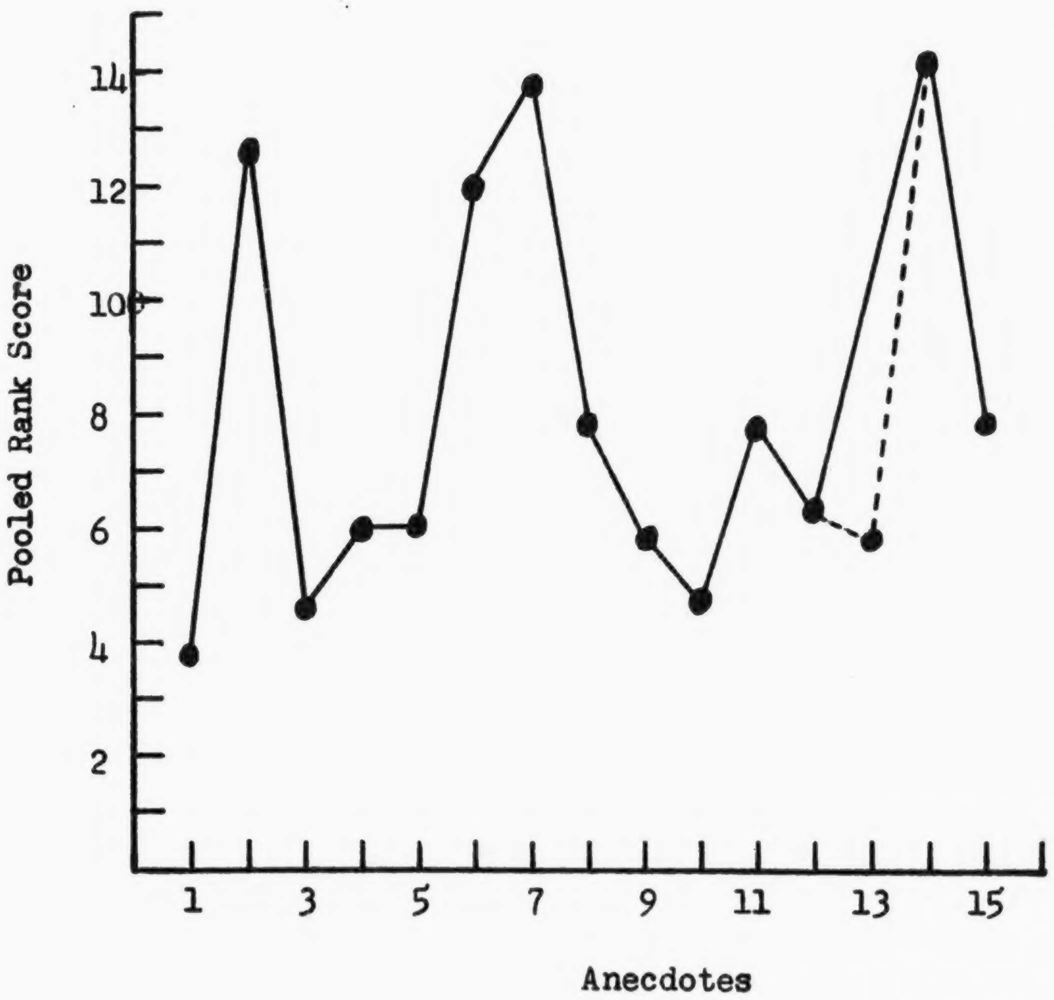


Figure 39 Distribution of ranks assigned to anecdotes. Subject No. 21.

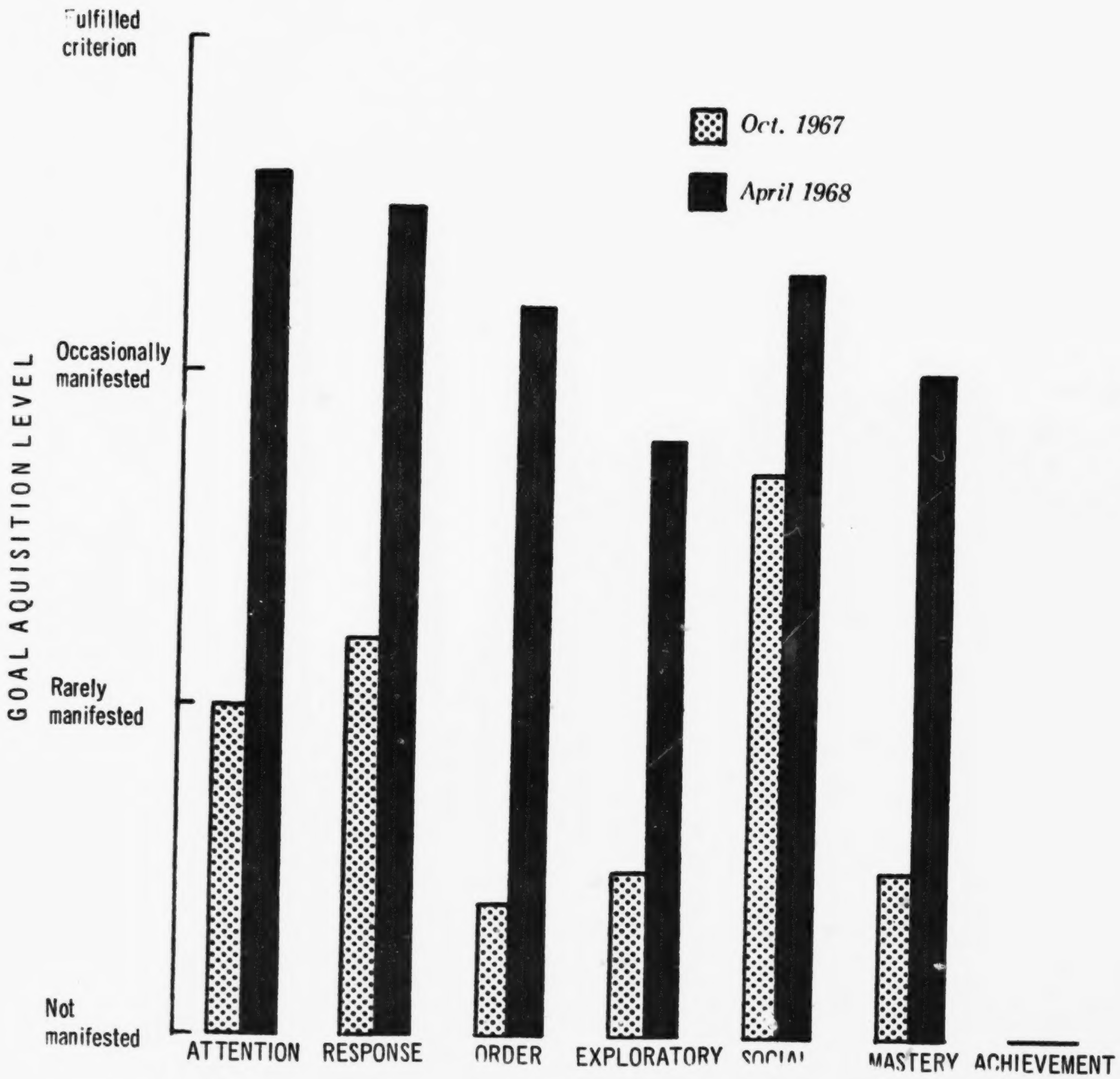


Figure 40. Comparisons of related gains in educational goals for Subject No. 21.

Chapter V

Evaluation of Project by Parent

At the end of the second year, parents were asked to evaluate the effectiveness of the project by responding in writing to the items included in the questionnaires (Appendix F) which were prepared for this purpose. Three of these questionnaires solicited information concerning behavior changes which the parents had observed in the subject, his siblings, and themselves. The fourth questionnaire was designed to obtain ratings of the various aspects of the parent program. Twenty-one parents representing fifteen subjects completed the questionnaires.

In responding to the questionnaire entitled "Thinking About Your Deaf Child", parents were first asked to describe changes in the subject's relationship with them and what they felt had been the causes of these changes. Changes listed included the following:

better communication with parent	(5)
more obedient	(5)
closer relationship	(4)
less demanding	(3)
more affectionate	(2)
happier	(2)
more outgoing	(2)
less hyperactive	(1)
more responsible	(1)
more independent	(1)
no change	(1)

Parents attributed changes to the following factors:

the total program	(7)
improved communication between parent and child	(4)
behavior modification techniques used in project	(3)
greater understanding by parent	(3)
communication and cooperation between staff and parents	(2)
the parent program	(1)
the child's increased security	(1)

These responses indicated an overall improvement in subject-parent relationships which was attributed to the global effects of the project and more specifically to improved communication and increased understanding on the part of the parent.

The following changes in relationships with adults other than the parents were cited:

better behaved, more courteous	(8)
more outgoing	(8)
better communication	(4)

increased awareness	(3)
more affectionate	(2)
no change	(2)

Changes in this area were attributed to the following:

influence of staff members	(6)
the total program	(5)
increased self-confidence	(3)
behavior modification techniques used in the project	(2)
better communication	(1)
increased trust	(1)

The responses to this item indicate increased rapport with adults which was again attributed to the global effects of the project and to a lesser degree, improved communication.

Parents reported the following changes in their son's relationships with other children at home and in the neighborhood:

more participation in group activities	(6)
more interest in other children	(4)
"getting along better" with other children	(3)
better communication	(2)
shares better	(1)
not as "bossy"	(1)
more aggressive	(1)

These changes were attributed to the following factors:

the influence of living with other children	(7)
behavior modification techniques used in the program	(5)
increased communication	(3)
increased self-confidence	(1)

Responses to this item indicate an increased acceptance of subjects by siblings and neighborhood children into their play activities due to the behavior changes that resulted from living with the other children in the project in a highly structured environment utilizing behavior modification techniques and their increased communication skills.

In responding to the questionnaire, "Thinking About Your Other Children", fifteen parents described changes in the attitudes of siblings toward the subjects. Increased acceptance and interest in the deaf brother were generally cited. The use of manual communication by siblings learned as a result of attendance at the weekly classes provided for parents or through informal instruction at home by the subject was listed by twelve respondents as a factor in these attitudinal changes. Other factors listed included:

parental counseling of siblings	(3)
increased language ability in subject	(1)
improved behavior of subject	(1)

Thus, a general positive shift in the attitude of siblings toward their deaf brother is indicated and is generally attributed to increased communication through the use of fingerspelling and sign language.

In the questionnaire, "Thinking About Yourself", parents were asked to describe changes in their feelings about the subjects. Responses indicated:

increased hope for the child's future	(6)
increased understanding of the child	(3)
increased confidence as a parent	(2)
less irritation with the child	(1)
no change	(1)

Eight of the twenty parents responding to this item described changes in their child's behavior rather than changes in their attitudes toward the child. This would seem to indicate that a large percentage of the parents were more concerned with affecting behavior changes in their child than in themselves. Among causes to which attitudinal changes were attributed were:

changes in the child's behavior	(6)
acceptance of the child's handicap	(4)
increased awareness as a result of the parent counseling sessions	(3)
better communication between parent and child	(2).

In responding to the question concerning changes in attitudes toward their child's deafness, parents responded as follows:

increased acceptance of their son's deafness	(14)
less guilt feelings	(2)
no change in attitude	(3)

In response to the question concerning changes in their marital relationship, the parents of five subjects reported reduced tension in their marriages. Four parents did not respond to this question because they had been divorced prior to their son's admission to the project. The mother of one subject was widowed during the first year of the project and the marriages of three respondents were seen as highly stressful due to the drinking problems of the father (2) or the mother (1). The mother of one subject reported less friction while the father reported no change in their marital relationship.

Improved communication between parent and child was reported by sixteen of the nineteen parents responding. Eight parents attributed this to the weekly classes in manual communication (all of whom had attended these classes regularly). Four parents cited their increased interest in and patience with the child as the causal factor in improving communication while one parent attributed it to improved skill in "lipreading" and another to decreased tension in the child.

All of the parents reported a feeling of increased hope for their children's futures and described generally realistic goals for them.

Responses throughout this questionnaire indicated favorable changes in parental attitudes toward subjects which were generally attributed to increased understanding of their child and his handicap, increased communication with the child, and the behavior changes which had taken place during the time the child was enrolled in the project.

Parent Program Ratings

Parents were asked to rate the various aspects of the parent program using a four point Likert scale with values rated as follows: 3 = very valuable, 2 = somewhat valuable, 1 = of little value, and 0 = of no value. Table 11 shows the ratings obtained from twenty-two parents in order of importance as perceived by them. These ratings indicate that activities designed to facilitate communication between the project staff and parents or between the parents and their children were regarded as most helpful while lecture type presentations and the parent counselling program were judged less valuable.

Parents were next asked to identify those aspects of the total program which they felt had been most helpful and those which they judged to be least helpful to them as parents. Table 12 shows the activities listed in order of the frequency of citations in each category. The classes in manual communication were rated as being most valuable by those parents who attended them regularly. Communication between staff members and parents ranked second.

No negative ratings of any aspect of the program were made by eleven parents while six rated the parent counseling program least helpful.

Finally, parents were asked to state the aspects of the program which they felt were most helpful and least helpful to their son. Table 13 shows the factors listed in these categories in order of frequency cited.

Statements in response to this question tended to be more global and were generally laudatory.

While values assigned by parents may be prejudiced by what they hope to achieve, it is for this very reason that they reflect the parent's evaluation of the program.

TABLE 11

Ratings of Parent Program

Area	Very Valuable	Somewhat Valuable	Of Little Value	Of No Value	Total Score
Talk on psychological implications of deafness by school psychologist	20	2			64
Demonstration of teaching methods by teachers	20	2			64
Weekly lesson plans and reports on progress and behavior in school	20	2			64
Teacher-counselor progress reports	20	2			64
Parent-Counselor-Teacher conferences	21				63
Parent-teacher conferences	20	1			62
Manual communication classes	20	1			61
Talks by counselors on dormitory life	19	2			61
Summer homework	15	7			59
Talk on discipline by school psychologist	16	5			58
Talk on language development of deaf children	18	2			58
Panel discussion by deaf adults on what it is like for a deaf child growing up in a hearing family	17	3			57
Gym demonstration	15	6			57

TABLE 11 cont'd

Ratings of Parent Program cont'd

Area	Very Valuable	Somewhat Valuable	Of Little Value	Of No Value	Total Score
Film on deafness and talk on deafness and hearing aids by school audiologist	11	8			49
Parent discussion and counseling meetings with the family and marriage counselor, Mr. Kirkpatrick	9	7	4	2	45
Reports on results of personality tests by Mr. Kirkpatrick	8	7	2	2	42

Table 12

Aspects of Program Judged
Most Helpful to Parents

N	Activity
9	Weekly manual communication classes
5	Communication between staff and parents
3	Greater understanding of problems of deafness
3	Parent counseling program
2	Total parent program
1	Small staff-pupil ratio
1	Psychologist's talk on discipline
1	Panel discussion by deaf adults

Aspects of Program Judged
Least Helpful to Parents

N	
11	None
6	Parent counseling program
1	Manual communication classes

Table 13

Aspects of Program Judged Most Helpful to Children

N	
12	Overall program including behavior modification
6	Concern of staff for individual children
1	Behavior modification
1	Parent conferences
1	Manual communication

Aspects of Program Judged Least Helpful to Children

N	
15	None
1	Dormitory life
1	Manual communication

While values assigned by parents may be prejudiced by what they hope to achieve, it is for this very reason that they reflect the parent's evaluation of the program.

CHAPTER VI

Conclusions and Recommendations

In the section which follows we shall discuss the effectiveness of the project in achieving its objectives and attempt to analyze the contributions of the various factors in the program design. Finally, an attempt will be made to suggest possible implications of the study for the education of multi-handicapped deaf children.

As stated in the first chapter, the primary purpose of the project was to bring about behavior changes in emotionally disturbed deaf boys that would enable them to function in a classroom setting. Operationally stated, this meant to explore appropriate classroom management techniques that would enable the subjects to live harmoniously with others and learn in a small group situation.

Current Status of Subjects

At the end of the first year the behavior of three of the subjects had modified to the extent that they were evaluated for possible admission to regular classes at the California School for the Deaf at Riverside. Evaluations were carried out by the supervising teachers of the departments to which the children were seeking admission following the usual screening procedures. Two of these children were accepted for admission to the Lower School in the Fall of 1967. The third subject was admitted to the Elementary School and was integrated for part of each day during the last few months of the Spring Semester (1967) with the class he would be joining as a full-time student in the Fall. Two years later these children appear to have made a satisfactory adjustment to the school and dormitory environments.

At the end of the second year six more of the original sixteen subjects were evaluated and accepted for admission to classes in the Lower, Elementary, and Junior High School Departments at the California School for the Deaf at Riverside. Two of these subjects while not considered fully ready to make the transition to regular classes were accepted due to the pending termination of the project. One year later the four children who were considered ready to be integrated into regular classes appear to have made a satisfactory adjustment in their new environment. The other two subjects are experiencing some difficulty in adjusting. One of these children, a former patient in a state hospital for the mentally retarded and enrolled in a workshop for retarded children immediately before entering the project is failing to make satisfactory academic progress. The other child is having difficulty in his relationships with his peers in the Junior High School.

Ten subjects were placed in educational programs other than the California School for the Deaf when the project was terminated. One child was returned to the day class in which he was formerly enrolled and is reported to have made a satisfactory adjustment. Another child is currently enrolled in a private school for multi-handicapped children where he is making satisfactory progress. Four of the subjects are enrolled in a day school program but are not making a satisfactory adjustment. Two of the ten children have been excluded from the day class programs in which they were enrolled. A minimum day placement in a class with hearing trainable mentally retarded children has been provided by the local school district for one child and the tenth subject is currently residing in Japan as a result of his father's assignment to military duty there.

In comparing the behaviors manifested by the subjects when they first entered the program with their behavior at the time of its termination it appears that the project was successful in achieving its primary purpose. This contention is substantiated by the findings contained in the pre- and post-test comparison of classroom conduct by nonparticipant judges and the post-test comparison with the contrast group as shown in Table 1 and Figure 1. Further support is provided by the analysis of longitudinal data of participant and nonparticipant observers shown in Tables 2 and 3 and Figure 2. Evidence of the diminution of disruptive classroom behaviors is provided by an analysis of behavior by categories in Table 6.

According to Hewett's concept of a "Developmental Sequence of Educational Goals" a [illegible] must (1) learn to pay attention; (2) respond in learning; (3) order his behavior; (4) explore his environment, and (5) function appropriately as a member of a group. These are considered readiness skills which are prerequisite for: (6) the mastering of intellectual skills and (7) the achievement of intrinsic motivation (Hewett, 1968). At the time of their admission to the project the subjects were unable to function effectively in a classroom setting because of behavioral deficits on the various developmental levels cited above. (A detailed description of the entering behavior of subjects is contained in the individual case studies). Ratings by the project teachers of the classroom behavior of subjects in relation to the seven developmental levels as shown in Figure 3 indicate an increase in all categories especially in readiness skill areas. These findings lend support to Hewett's concept of a hierarchical dependency of mastery and achievement on the preceding five readiness goals. Further evidence of the attainment of appropriate classroom behavior by subjects is shown by the analysis of classroom activities in Table 9.

While the primary goal of the project was to modify the behavior of the subjects to the point that normal teaching could occur, the behavior modification techniques employed were applied within the context of an instructional program which focused primarily on the development of skills in the areas of language, reading, and mathematics. Thus, there was a parallel concern for the acquisition of academic skills by the subjects. A reduction in the incidence of maladaptive behaviors should have been reflected in an increase in the achievement of academic skills. This, in fact, did occur as shown by the reading achievement scores in Table 8. There were generally positive changes in reading achievement and these gains compare very favorably with those of a randomly selected group of "normal" deaf children of comparable age. A comparison of the level of reading retardation and the maladaptive behavior manifested by subjects showed a low positive correlation. This further substantiates Hewett's contention that the acquisition of mastery skills such as reading are dependent on the development of prerequisite readiness skills.

Several of the subjects had no understanding of the concept of numbers when they first entered the project while others had minimal skills in arithmetic computation. Table 8A shows the gains made by the eleven continuing subjects in arithmetic computation. This provides further evidence of the acquisition of academic skills by the subjects.

Because of the severity of the behavior problems of the subjects and their widely varying educational backgrounds, an attempt was made to provide a highly individualized instructional program. Table 9 gives an indication of the extent to which this objective was achieved. Items 36 - 39 show the size of instructional groupings and indicate that the greatest percentage of time was spent in individual instruction. Items 1 - 11 describing the instructional activities of the teachers clearly indicate the emphasis on communication with individual students. The use of lecture as a method of instruction as shown by Item 4 was rarely used in the Fall of 1966, and did not occur at any time during the observation periods in the Spring of 1968.

To facilitate the implementation of an individualized instructional program the teaching staff was given in-service training in the development of programmed instructional materials and encouraged to develop adjunct programs. The purpose in developing these materials was to provide the subjects with activities which would reinforce the concepts which had been introduced and taught by the teacher. Items 17, 18, and 19 in Table 9 indicate that the subjects were engaged in this type of activity during much of the school day. During the second year the husband of Teacher "C" devised a simple teaching machine for use by the children in her class. Item 44 in Table 9 indicates the extent to which this machine was used during the second year in her room. The teaching staff was given instruction in the use of the Kodak "Instamatic" M 14 "Super-eight" movie camera and the 35mm single lens reflex camera during the second year of the project. Teachers were encouraged to take motion pictures of various class activities for use in the development of language through experience stories. Teacher "S" utilized this technique in language instruction with his class as shown by Item 10 in Table 9. Teacher-made 35mm slides were designed for use in teaching vocabulary in a group setting or for review by individual students using a slide viewer or a carousel projector. Item 42 in Table 9 shows the extent to which these materials were used by the children in Classes "S" and "W" during the second year. Teachers "C" and "M" also engaged in making movies and 35mm slides for use in their classrooms but the photographic quality of the materials they produced was such that they were not able to use them for instructional purposes. Given added instruction in photography techniques, they would probably have achieved greater success in this area.

The instructional program was based on the operational framework provided by a somewhat modified version of the "Engineered Classroom" model developed by Dr. Frank Hewett. The use of this model required the analysis and description of individual learning disabilities and the consistent and systematic use of positive reinforcement in the form of checkmarks to shape appropriate behavior. In addition to these tangible procedures, teachers were asked to reinforce the children verbally as they awarded checkmarks and to praise them for appropriate behavior and satisfactory completion of assigned tasks. Items 59 - 65 in Table 9 indicate that the teachers showed affection and were supportive in their relationships with the children. Demonstrations of affection and approval were diminished in the second year as the need for extrinsic motivation of the subjects decreased. Negative expressiveness of teachers was low in comparison with expressions of affection and support.

Another objective of the project was to bring about behavior changes in the subjects that would enable them to live harmoniously with others. The ratings by staff members of shifts in the behavior of subjects in their relationships with adults and peers shown in Table 7 indicate that moderate to marked improvement was made in relationships with adults and moderate improvement was made in interchild rapport. The higher ratings by staff members of the subjects' relationships with adults are probably affected by their desire to show improved relationships with the subjects. Parental descriptions of changes in the subject's relationships with themselves, with other adults, and with siblings and neighborhood children shown in Chapter V indicate that there were positive shifts in these relationships. These ratings are undoubtedly affected by the hopes of parents for their children. Ratings by staff members and parents while admittedly biased, because of their vested interest in the project, tend to support the findings of nonparticipant observers that rapport with adults and peers did in fact increase. Further evidence of increased social acceptability among peers is indicated in the placement of felt figures by subjects in the projected dyadic affiliations test shown in Figure 4. The assumption is that children are projecting familial relationships in their manipulation of the felt figures.

The parent program was designed to provide a basic orientation to the educational and emotional problems imposed by deafness, to explore and bring about changes in parental attitudes through group counseling, to improve communication between parents and their deaf children by providing instruction in manual communication, and to develop a cooperative working relationship with parents by building and maintaining lines of communication. Ratings by parents of the program which are shown in

Chapter V indicate that activities designed to facilitate communication between the project staff and parents or between the parents and their children were regarded as the most helpful aspect of the program. Parents who attended the classes in manual communication regularly rated them as the most valuable aspect of the program. They reported significant changes in their relationships with their deaf children as a result of their increased ability to communicate more effectively with them.

Activities designed to provide the parent with a basic orientation to the problems imposed by deafness were rated as being the second most important aspect of the parent program.

The parent counseling sessions were rated as the least valuable feature of the program. The parents generally expressed a reluctance to discuss their problems in a group setting. If a group therapy approach to working with parents is to be successful, participation must be on a voluntary basis over an extended period of time with a relatively small number of participants. These factors were not present in the parent counseling program. It was difficult to achieve significant changes in parental attitudes because of the infrequent attendance of several participants, the length of time between sessions, the size of the group, and the limited number of sessions. There was a basic incongruity in the use of a psychodynamically oriented approach in parent counseling while applying behavior modification techniques in shaping the behavior of the subjects themselves. A more consistent and perhaps a more effective approach would have been to provide instruction for the parents in the principles of behavior modification so that they would be able to apply these techniques in working with their children. This was, in fact, done on a limited basis and was received with interest and enthusiasm by the parents.

Generally speaking, there was a high correlation between participation by parents in the parent program and the degree of change in the behavior and academic achievement of their children. The parents of eight of the ten children who were able to gain admission to regular classes at this school or who have subsequently made a satisfactory adjustment in a class in their local community participated in the parent program regularly.

As noted in the Parent Attitude Research Instrument findings in Figure 5, a high degree of conflict in marriage among the parents of the project children is reported. The parents of six of the twenty-one subjects were divorced or separated prior to their son's admission to the project and a seventh couple instituted divorce proceedings during the first year. An eighth couple has recently separated because of the mother's drinking problems. No father is present in the home of seven of the twenty-one subjects and no mother in the home of one subject. These figures tend to substantiate the need for an early parent education and counseling program to help reduce the conflict which results from the presence of a handicapped child in the family.

Analysis of Program Factors

The program described in Chapter I attempted to coordinate and integrate the efforts of teachers, dormitory counseloss, and parents in achieving the project's objectives. The analysis of the contributions and weaknesses of various aspects of the program which follows is designed to assist those who will be charged with the responsibility for organizing similar programs in the future.

Small Staff-Pupil Ratio. A ratio of one teacher to four students was maintained during the first year. This ratio appears to be justified in view of the difficulty experienced in controlling the behavior of the subjects during the time they were adjusting to the classroom routine and the behavior modification procedures at the beginning of the project. As the behavior of the children was modified to the extent that they could begin to function more effectively in a classroom setting, the attention and efforts of the teachers shifted to the teaching of basic academic skills through a highly individualized prescriptive approach. The development and production of instructional materials necessary to carry out this sort of program demanded much of the teacher's time and efforts.

Team teaching may provide a more efficient pattern of staff utilization as the behavior of children is modified to the point that they can tolerate changes in their initial basic classroom routines.

A ratio of five dormitory counselors to sixteen children was maintained throughout the two years of the project. This ratio appears necessary if counselors are to be expected to carry out behavior modification procedures and activities designed to reinforce the concepts taught in the classroom during the time that these children are in their care.

Behavior Modification Techniques. The use of a modified version of the "Engineered Classroom" model as developed by Dr. Frank Hewett provided an operational framework for the analysis of the behavior of the subjects based on a hierarchical conceptualization of educational goals, the assignment of appropriate tasks for individual children, and the systematic use of environmental consequences to modify the behavior of the children.

Operational models for the application of behavior modification techniques generally employ a fixed ratio reinforcement schedule; that is, reinforcement regularly delivered after a specific number of responses. Experimentation has shown that this type of reinforcement is most effective in shaping behavior within a relatively short period of time. The "Engineered Classroom" model utilized in this study employed a fixed interval schedule of reinforcement, that is, reinforcement provided on a fixed time schedule. The rationale for the use of this type of reinforcement schedule is that it lends itself to easier management by the classroom teacher and the fact that schools are time oriented institutions. Verbal mediation by the teacher through gestures, signs, or fingerspelling served to inform the child why he had or had not earned the maximum possible number of checkmarks during each time interval.

There was concern at first that some of the subjects might have difficulty in understanding the checkmark system because of their lack of communication skills. By pairing an "M and M" candy with each checkmark awarded initially, it was a relatively simple matter to convey the concept that checkmarks were associated with favorable consequences. With the majority of the subjects, it was possible almost immediately to defer exchanging checkmarks for a reward until the end of the school day.

It was necessary initially with four of the subjects to adhere to a fixed ratio schedule of reinforcement as the most effective means of shaping primary classroom behaviors such as sitting in a chair or looking at the teacher. These subjects were notable for their inability to remain seated or to attend to the teacher for even brief periods of time. After a period of about four weeks, it was possible to shift to a fixed interval reinforcement schedule with three of these children with candy reinforcement every hour. By the end of the year these candy rewards were given twice a day in exchange for a minimum number of checkmarks.

The checkmark system was effective in helping the children internalize relevant environmental limits. This was shown by their voluntary descriptions to staff members of the maladaptive behavior that had caused them to earn less than the maximum number of checkmarks possible during a time interval. They were also able to recall and describe their behavior during days when they had earned less than the minimum number of checkmarks necessary for a reward as shown by their graph card. At the end of the first year, one child voluntarily described the behavior he had exhibited when he first entered the project, compared it with his present level of behavior, and indicated his desire to maintain and improve on it.

There was some concern among staff members that the subjects might become overly dependent on the extrinsic motivation provided by rewards to maintain their behavior and would have difficulty in making a transition to intrinsic forms of reinforcement. This did not prove to be the case. The subjects adjusted easily to the increased deferment of rewards and became more interested in the number of checkmarks they could earn than in the reward for which the checkmarks were exchanged. Children who were accepted for admission to regular classes were withdrawn from the checkcard system several weeks before they left the project with no adverse effects on their behavior and they continue to function in their new setting without extrinsic rewards.

One difficulty encountered in initiating the checkcard system was determining appropriate rewards for some subjects. When these were determined, the checkcard system became highly effective in modifying the behavior of these children. One staff member created a problem by using the checkcard as a vehicle for giving demerits rather than as a means for providing positive reinforcement. This had a devastating effect on the behavior of several children until the situation was corrected.

The operational framework provided by Hewett's "Engineered Classroom" model made possible the systematic application of behavioral principles in an objective and scientific manner by the project staff in helping the subjects realize their full learning potential.

Use of Manual Communication. The inability to communicate effectively is a major cause of emotional disturbance among the deaf. Young deaf children frustrated by their inability to understand or to make themselves understood by their parents and teachers often resort to maladaptive behaviors such as tantrums as a means of achieving their desires. Reinforcement of these behaviors by adults increases the probability that they will reoccur and increase in habit strength. While behavior modification techniques are useful in eliminating these maladaptive behaviors, it is essential to remedy their underlying cause. The use of the simultaneous method of communication served to eliminate much of the frustration caused by inadequate receptive and expressive communication. It also made possible verbal mediation by staff members while carrying out behavior modification procedures and generally facilitated the teaching-learning process.

Weekly classes in manual communication were designed to provide parents with the basic communication skills that would enable them to work more effectively with their children in modifying their behavior and helping them to develop basic vocabulary and language concepts. Parents who attended these classes regularly rated them as the most helpful aspect of the parent program and reported positive changes in their relationships with their children as a result of improved communication.

"Teacher-made" Visual Aids. Various forms of visual media were developed by members of the teaching staff for use in the instructional program. Super-eight color movie films of various class activities were used to teach vocabulary concepts and as the basis for developing language and reading skills through the medium of experience stories. Color slides were used to teach vocabulary in group instruction and as a self-instructional activity. The overhead projector was used extensively for instruction and was highly effective in holding the children's attention for extended periods of time while permitting the teacher to maintain eye contact with her class.

All of these materials had high stimulus value and provided concrete examples of the concepts that were taught. The subjects were especially motivated by the movie films depicting their various activities.

"Teacher-made" Programmed Instructional Materials. Teachers developed adjunct programs to provide an independent self-instructional activity to reinforce the concepts which they had taught. These programs permitted children to proceed at their own pace and provided the many repetitions necessary for the development of vocabulary and language concepts. These materials were consistent with the use of behavior modification techniques since they provided immediate knowledge of results and reinforcement of correct responses. They also freed the teachers to work with individual children.

While these materials were highly effective, they required a great deal of time to develop and produce. Summer workshops devoted to the development of curriculum materials appear to be the most practical solution to this problem. To avoid duplication of effort, provision should be made for dissemination of these teacher produced materials through an appropriate agency such as the Instructional Materials Centers or the Captioned Films Regional Centers.

Teacher-Counselor Teams. Establishing and maintaining lines of communication between teachers and dormitory counselors to promote maximum staff effectiveness through coordinated effort is a primary administrative concern in residential schools for the deaf. The small pupil staff ratio in this project made it possible to establish a cooperative working relationship between teachers and counselors working with the same children. This was accomplished through weekly team planning conferences by providing copies of the teacher's lesson plans for the dormitory counselors and by providing copies of the dormitory counselor's afternoon activity plans for the teachers. These measures were designed to coordinate the activities of staff members in achieving the goals of the project. The effectiveness of the behavior modification procedures can be attributed to a large extent to the fact that there was consistency in their application by the project staff. Several of the dormitory counselors were highly effective in carrying out activities designed to reinforce the vocabulary and language concepts which had been taught by members of the teaching staff.

Parent Education and Counseling Program. The parents of the project children generally lacked a basic understanding of the psychological and educational implications of deafness and an efficient means of communication with their deaf child. As a result, they were generally ineffective in their attempts to promote the social and intellectual development of their children.

Many of the maladaptive behaviors exhibited by the project children had been reinforced unwittingly by their parents because of their belief that these behaviors were typical of deaf children.

The parent education program was designed to provide parents with the insights and communication skills they would need to enable them to work more effectively with their children in cooperation with the project staff. An effort was made to promote a cooperative working relationship between parents and the project staff by maintaining lines of communication. Parents were provided with weekly resumes of classroom activities and suggestions for procedures they could carry out at home to reinforce the concepts which had been taught by the teacher. Frequent conferences were provided with staff members and parents were encouraged to apply behavior modification procedures with their children at home in conjunction with those being employed by the project staff.

The effectiveness of the parent program in achieving its goals is indicated by the greater degree of change in behavior and academic achievement among those subjects whose parents were regular participants.

The parent counseling program was apparently ineffective in bringing about changes in the attitudes of the majority of parents for the reasons alluded to earlier.

It appears that the success of programs for multi-handicapped deaf children in achieving their goals will be contingent to a large extent on the degree of active, cooperative participation of parents. While this is true of all educational programs for deaf children, it is more imperative in working with children who have severe behavior and learning problems.

Recommendations

Educators of the deaf are confronted with the problem of providing effective educational programs for a growing number of multi-handicapped children who present a wide variety of learning and behavior problems. Experience has shown that traditional approaches to educating these children are generally ineffective. The results of this study indicate that the factors inherent in the project design may merit consideration in planning subsequent programs for other multi-handicapped deaf children. While this study was limited to emotionally disturbed deaf boys with normal intelligence, the techniques employed could probably be applied in working with children manifesting other combinations of handicapping conditions. The need for smaller classes, the application of behavioral principles in modifying and maintaining the behavior of these children, flexibility in methods of communication, specialized instructional materials, and the involvement of dormitory counselors and parents appear to be critical factors in planning and implementing programs that will insure that these children achieve their maximum potential.

APPENDIX A

GRADUATE STUDENT'S RANKINGS OF NARRATIVE REPORTS

It was felt that if improvement had been shown during the experiment, such improvement should be reflected in the narrative reports which had been written daily. Two studies were completed in this respect: one on the students who had been in the program for the full two years and the other on students who had participated for only one year.

For those students who had been in the program for the full two years, ten narrative reports each were randomly selected from the reports available. The reports were arranged in random order. Notes on each of the eleven subjects were then ranked by each of ten graduate students in education from the University of Southern California. The judges were given a brief background of the study and a copy of Hewett's hierarchy of educational tasks to use as a guide in their ranking. A coefficient of concordance was computed for the rankings of each pupil to determine the extent of confidence one could place in the ranks. Median ranks were then correlated with the actual chronological rank order of the notes using the Spearman rank order correlation (rho).

The procedure for subjects in the program for only one year was identical to that above, except that only five narrative reports were randomly selected for each of the subjects.

Results for Two Year Subjects

After each of the ten judges had ranked the ten notes on each of the eleven subjects, the array of ranks assigned each pupil's set of anecdotes was tested for agreement by a coefficient of concordance. All coefficients were significant at or beyond = .01.

Median ranks were computed for each anecdote. These median rank values were then correlated with the actual chronological rank order of the anecdotes. These correlations ranged from -.19 to +.90. Six of the correlations were +.45 or higher. Simultaneous interpretation of these eleven coefficients does not seem entirely feasible. However, one may draw the guarded conclusion that there is an overall moderate amount of agreement between the pooled ranks and the actual chronological order of the anecdotes. Those correlations at or above .56 are statistically significant at the five per cent level of chance.

Results for One Year Subjects

After each of the ten judges had ranked the five notes on each of the ten pupils, the array of ranks assigned each pupil was tested for agreement by a coefficient of concordance. Eight of the ten coefficients were significant at or beyond the five per cent level of chance. Median ranks were computed and correlated with chronological rank orders as described above. These correlations ranged from +.08 to +.87 with nine of the ten being above +.50. With only five notes being used, a coefficient of .90 or higher is required for statistical significance. While none of the coefficients reached this level, the overall agreement between the two sets of ranks appears encouragingly high. In fact, one may conclude that a substantial relation exists between the two sets of ranks.

The results of these two studies appear to be consistent with other results from the project. First, positive changes did seem to occur which might be expected to render the subjects more amenable to formal classroom learning. Second, the changes which were noted during the first year of participation in the program are more pronounced than subsequent progress. This conclusion seems warranted both from the analysis of behavior by categories and from the fact that agreement of assigned ranks and actual ranks is considerably higher for analysis of pupils in the program for one year than for those who participated for a longer time.

SUMMARY OF STATISTICS FOR STUDENTS IN PROGRAM FOR ONE YEAR

Subject	Coefficient of Concordance	Spearman's rho
3	.51*	.87
6	.96*	.51
8	.23*	.75
11	.47*	.68
13	.35*	.08
15	.15	.57
17	.40*	.81
18	.07	.83
20	.41*	.63
21	.36*	.56

*Significant $\alpha = .05$

SUMMARY OF STATISTICS FOR STUDENTS IN PROGRAM FOR TWO YEARS

Subject	Coefficient of Concordance	Spearman's rho
1	.59**	.66*
2	.29**	-.19
4	.50**	.45
5	.44**	.32
7	.65**	.06
9	.36**	.05
10	.27**	.55
12	.34**	.76*
14	.31**	.65*
16	.42**	.90*
19	.46**	.27

*Significant $\alpha = .05$
**Significant $\alpha = .01$

BACKGROUND INFORMATION FOR EVALUATORS

Over a period of two years (1966-68) the California School for the Deaf at Riverside carried on an experimental study with emotionally disturbed deaf boys ranging in age from seven through twelve. The subjects were all prelingually deaf and were unable to understand speech with their eyes closed even with amplification. A majority of the subjects had little or no receptive or expressive communication because of their deafness and their inability to function in a regular educational program for deaf children.

The Leiter International Performance Scale was administered to all subjects, and all had an intelligence level of at least dull-normal. In addition, no subject was severely neurologically impaired as shown by neurological examination and EEG tracings. All of the subjects had history of hyperactivity or some other emotional problem that prevented their satisfactory performance in regular educational programs for the deaf.

The purposes of the study were:

1. To explore the best teaching techniques to be used to bring about behavioral change in seriously emotional disturbed deaf children that would result in these children being able to live harmoniously with others and to learn in a small group situation.

2. To explore the appropriate program and activities for these children in their living arrangements to bring about change as stated above.

3. To explore the effect of parental education and counseling in bringing about change in the behavior of these children.

All of the subjects were assessed by the teaching and dormitory staff members using a rating form based on Dr. Hewett's (1967) "Hierarchy of Educational Tasks". This developmental hierarchy "delineates seven stages of learning and the tasks which must be accomplished at each level if efficient learning is to occur." Through the use of this rating the children could be described in terms of their deficits in learning readiness. The use of the hierarchy in effect provides a link to link diagnosis with educational operations appropriate at various levels of development. According to Hewett, "The child must learn to pay attention, respond in learning, order his behavior, explore his environment, and function appropriately as a member of a group if he is to master intellectual skills and achieve intrinsic motivation for learning."

This hierarchy of educational tasks is helpful in determing what the child must learn so that he can reach the state of readiness that will enable him to function successfully in a learning situation.

Hewett's Hierarchy of Educational Tasks

Level	Tasks
Attention	Attending to assignments. Preferring reality instead of fantasy. Attending to behavior which supports learning rather than ritualistic compulsive behavior. Having appropriate interests and beliefs. Attending to the teacher. Retaining the information.
Response	Responding to assignments. Not evidencing constriction in learning performance. Responding to a wide range of learning interests. Approaching teacher and peers. Responding in a classroom setting.
Order	Following directions. Displaying controlled behavior in learning. Functioning within classroom limits. Completing assignments.
Exploratory	Acquiring complete and accurate knowledge of the environment. Independent interest in exploring the environment. Being competent in sensory-motor exploration of environment.
Social	Obtaining the approval of others. Not being overly dependent on the attention and praise of others.

Mastery	Utilizing intellectual capacity in self-care. Acquisition of intellectual and academic skills.
Achievement	Pursuing learning on a basis of intrinsic motivation.

After the dormitory staff and teachers had completed their evaluations of individual subjects, a staff conference was held to review these deficits that were causing problems for individual children and strategies were devised for overcoming them.

To bring about behavior changes in the subjects a modification of the engineered classroom devised by Dr. Hewett was utilized. Children took a checkcard from the rack provided for this purpose inside the classroom door as they entered school each morning. This card was retained on the children's desks throughout the day. Every fifteen minutes checkcards were awarded by the teacher; two black checkmarks for beginning the assigned task promptly, three black checkmarks for completing the assigned task, and five red checkmarks for appropriate behavior during the fifteen minute period. If the child's performance was below the expected level, checkmarks were withheld for that period. Awarding of checkmarks was coupled with teacher praise. At the end of the day the number of checkmarks earned was totaled and recorded on a graph card which was on display in the classroom. This graph card served to provide a record of behavior for the month. If a sufficient number of checks was earned during the day the card was exchanged for a reward. These rewards took the form of candy or money. Where money was used as a reward a dime was placed in a piggy bank at the end of the day and this money was used to purchase articles at a local five and ten cent store or was used during a weekly trip to a local bowling alley.

At times, children were unable to maintain a satisfactory level of performance at their assigned tasks. When this occurred, teachers used various interventions which were designed to insure that the child would continue to earn checkmarks. These interventions are quite similar to those devised by Dr. Hewett (1967), and descend the hierarchy of educational tasks in the order of their application.

1. Send student to study booth or corner of room.

2. Modify assignment.

3. The use of teacher approval or disapproval.

4. Send to activities center.

5. Provide individual assistance.

6. Time out.

7. Exclusion.

In addition to the checkmark system employed in the classroom the dormitory counselors used a similar system during the time the children were under their care. Checkcards were exchanged for rewards in the evening, and these rewards took the form of candy, Cracker Jacks, or soda pop. In addition, bonus checks were awarded for exemplary behavior during the day. If the child received enough of these he was permitted to select from a variety of small, plastic toys.

The purpose of the project was to determine the effectiveness of behavior modification procedures in helping the subjects to modify their behavior to the extent necessary for their successful integration into regular classes and dormitory programs for deaf children.

Over the two year period narrative behavior reports were compiled on each of the subjects by the project staff. These reports are to be used to determine the degree of the effectiveness of the procedures used in the experimental study. We have randomly selected ten of these weekly reports on the eleven subjects who were involved in the study over the two year period. Please arrange these in what you judge to be an ascending level of behavior with the reports showing the greatest degree of maladjustment at the beginning and the most appropriate behavior last. Your ratings will be correlated with the actual chronological order of these reports and will serve to provide us with the statistical information that we need to complete our final report for the U. S. Office of Education.

Thank you for your cooperation.

APPENDIX B

FORM USED FOR STAFF RATINGS

CHILD'S NAME:____________________________________

BEHAVIOR WITH ADULTS

Improved		Unchanged		Worse
5	4	3	2	1

BEHAVIOR WITH OTHER CHILDREN

Improved		Unchanged		Worse
5	4	3	2	1

APPENDIX C

READING ACHIEVEMENT SCORES FOR CHILDREN IN REGULAR CLASSES AT CALIFORNIA SCHOOL FOR THE DEAF, RIVERSIDE

One Year Change in Gates Primary Reading Test Scores for Random Sample of Non-Disturbed Deaf Pupils

Subject	CAGP Test 1	Gates Primary Test 1	Gates Primary Test 2	Change[1]
Lower School				
1	2.33	1.4	2.2	0.8
2	2.33	2.4	2.7	0.3
3	2.42	1.4	1.9	0.5
4	2.42	1.7	2.3	0.6
5	2.83	1.7	2.2	0.5
Elementary School				
6	2.67	2.5	2.6	0.1
7	3.08	1.5	1.7	0.2
8	3.08	2.9	3.6	0.7
9	3.17	1.9	2.2	0.3
10	3.33	1.8	1.8	0.0
11	3.83	2.8	2.4	-0.4
12	3.92	3.1	3.4	0.3
13	4.50	3.0	3.2	0.2
14	4.67	2.4	2.4	0.0
15	4.92	2.2	1.9	-0.3
16	5.08	2.0	1.6	-0.4
17	5.08	3.2	3.4	0.2
18	5.33	3.0	3.0	0.0
19	5.33	4.0	4.1	0.1
20	5.42	1.6	1.8	0.2
21	5.83	3.8	4.2	0.4
22	6.75	2.3	1.9	-0.4
23	7.0	2.8	2.2	-0.6
24	7.17	2.8	2.6	-0.2

[1] Mean difference = 0.13   t = 1.842 N.S.

APPENDIX D

PARENT ATTITUDE RESEARCH INVENTORY

Accepting comradeship with child

Children should be happier and better behaved if parents would show an interest in their affairs.

Laughing at children's jokes and telling children jokes makes things go more smoothly.

Parents who are interested in hearing about their children's parties, dates and fun help them to grow up right.

If parents would have fun with their children, the children would be more apt to take their advice.

When you do things together, children feel close to you and can talk easier.

Encouraging verbalization of conflicts

Children should be allowed to disagree with their parents if they feel their own ideas are better.

Children should be encouraged to tell their parents about it whenever they feel family rules are unreasonable.

A child has a right to his own point of view and ought to be allowed to express it.

A child's ideas should be seriously considered in making family decisions.

When a child is in trouble, he ought to know he won't be punished for talking about it with his parents.

Accepting rights of child as equal

Parents should adjust to the children some rather than always expecting the children to adjust to the parents.

Parents must earn the respect of their children by the way they act.

Children are too often asked to do all the compromising and adjustment and that is not fair.

As much as is reasonable a parent should try to treat a child as an equal.

Accepting rights of child as equal (Continued)

There is no reason parents should have their own way all the time, any more than that children should have their own way all the time.

Strictness by parents

A child will be grateful later on for strick training.

Strict discipline develops a fine strong character.

Children who are held to firm rules grow up to be the best adults.

Most children should have more discipline than they get.

Children are actually happier under strict training.

Keeping the child busy

There are so many things a child has to learn in life there is no excise for him sitting around with time on his hands.

Children who don't try hard for success will feel they have missed out on things later on.

Parents should teach their children that the way to get ahead is to keep busy and not waste time.

A child who is "on the go" all the time will most likely be happy.

The sooner a child learns that a wasted minute is lost forever, the better off he will be.

Acceleration of development

Most children are toilet trained by 15 months of age.

The sooner a child learns to walk, the better he's trained.

The earlier a child is weaned from its emotional ties to its parents, the better it will handle its own problems.

A mother should make an effort to get her child toilet trained at the earliest possible age.

A child should be weaned away from the bottle or breast as soon as possible.

Fostering child's dependency

A good mother should shelter her child from life's little difficulties.

A mother should do her best to avoid any disappointment for her child.

A child should be protected from jobs which might be too tiring or hard for him.

Parents should know better than to allow their children to be exposed to difficult situations.

Children should be kept away from all hard jobs which might be discouraging.

Intrusiveness by parents

A mother should make it her business to know everything her children are thinking.

A child should never keep a secret from his parents.

An alert parent should try to learn all her child's thoughts.

A mother has a right to know everything going on in her child's life because her child is part of her.

It is a mother's duty to make sure she knows her child's innermost thoughts.

Suppression of child's aggression

A child should be taught to avoid fighting no matter what happens.

A child should be taught to always come to his parents or teachers rather than fight when he is in trouble.

There is no good excuse for a child hitting another child.

Children should not be encouraged to box or wrestle because it often leads to trouble or injury.

Most parents prefer a quiet child to a "scrappy" one.

Breaking child's willfulness

Some children are just so bad they must be taught to fear adults for their own good.

It is frequently necessary to drive the mischief out of a child before he will behave.

A wise parent will teach a child early just who is boss.

Children need some of the natural meanness taken out of them.

It is sometimes necessary for the parents to break the child's will.

Avoidance of communication

If you let children talk about their troubles they end up complaining even more.

Parents who start a child talking about his worries don't realize that sometimes it's better to just leave well enough alone.

Children pester you with all their little upsets if you aren't careful from the first.

If a child has upset feelings it is best to leave him alone and not make it look serious.

The trouble with giving attention to children's problems is they usually just make up a lot of stories to keep you interested.

Suppression of sex interest

A young child should be protected from hearing about sex.

It is very important that young boys and girls not be allowed to see each other completely undressed.

Children who take part in sex play become sex criminals when they grow up.

Sex is one of the greatest problems to be contended with in children.

There is usually something wrong with a child who asks a lot of questions about sex.

Conflict in marriage

People who think they can get along in marriage without arguments just don't know the facts.

Sometimes it's necessary for a wife to tell off her husband in order to get her rights.

No matter how well a married couple love each other, there are always differences which cause irritation and lead to arguments.

There are some things which just can't be settled by a mild discussion.

It's natural to have quarrels when two people who both have minds of their own get married.

Irritability of parents

Children will get on any woman's nerves if she has to be with them all day.

Mothers very often feel that they can't stand their children a moment longer.

It's a rare mother who can be sweet and even tempered with her children all day.

Raising children is a nerve-wracking job.

It's natural for a mother to "blow her top" when children are selfish and demanding.

Fear of harming child (reaction to unconscious hostile feelings)

You must always keep tight hold of baby during his bath for in a careless moment he might slip.

All young mothers are afraid of their awkwardness in handling and holding the baby.

Mothers never stop blaming themselves if their babies are injured in accidents.

Most mothers are fearful that they may hurt their babies in handling them.

A mother's greatest fear is that in a forgetful moment she might let something bad happen to the baby.

Seclusion of the mother

The home is the only thing that matters to a good mother.

The women who want lots of parties seldom make good mothers.

A woman has to choose between having a well run home and hobnobbing around with neighbors and friends.

Too many women forget that a mother's place is in the home.

A good mother will find enough social life within the family.

Inconsiderateness of the husband

Mothers would do their job better with the children if fathers were more kind.

Husbands could do their part if they were less selfish.

When a mother doesn't do a good job with children, it's probably because the father doesn't do his part around the home.

If mothers could get their wishes, they would most often ask that their husband be more understanding.

Few men realize that a mother needs some fun in life too.

Dependency of the mother

There is nothing worse for a young mother than being alone while going through her first experience with a baby.

It isn't fair that a woman has to bear just about all the burden of raising children by herself.

A wise woman will do anything to avoid being by herself before and after a new baby.

Most women need more time than they are given to rest up in the home after going through childbirth.

Taking care of a small baby is something no woman should be expected to do all by herself.

Supremacy of the parent

More parents should teach their children to have unquestioning loyalty to them.

The child should be taught to revere his parents above all other grownups.

A child soon learns that there is no greater wisdom than that of his parents.

Parents deserve the highest esteem and regard of their children.

Loyalty to parents comes before anything else.

Excluding outside influences

It's best for the child if he never gets started wondering whether his mother's views are right.

A parent never should be made to look wrong in a child's eyes.

Children should never learn things outside the home which make them doubt their parents' ideas.

The child should not question the thinking of his parents.

There is nothing worse than letting a child hear criticisms of his mother.

Rejection of homemaking role

One of the worst things about taking care of a home is a woman feels that she can't get out.

Having to be with the children all the time gives a woman the feeling her wings have been clipped.

Most young mothers are bothered more by the feeling of being shut up in the home than by anything else.

One of the bad things about raising children is that you aren't free enough of the time to do just as you like.

A young mother feels "held down" because there are lots of things she wants to do while she is young.

Ascendancy of the mother

If a mother doesn't go ahead and make rules for the home, the children and husband will get into troubles they don't need to.

Children and husbands do better when the mother is strong enough to settle most of the problems.

A mother has to do the planning because she is the one who knows what's going on in the home.

The whole family does fine if the mother puts her shoulders to the wheel and takes charge of things.

A married woman knows that she will have to take the lead in family matters.

Martyrdom of the mother

Children should realize how much parents have to give up for them.

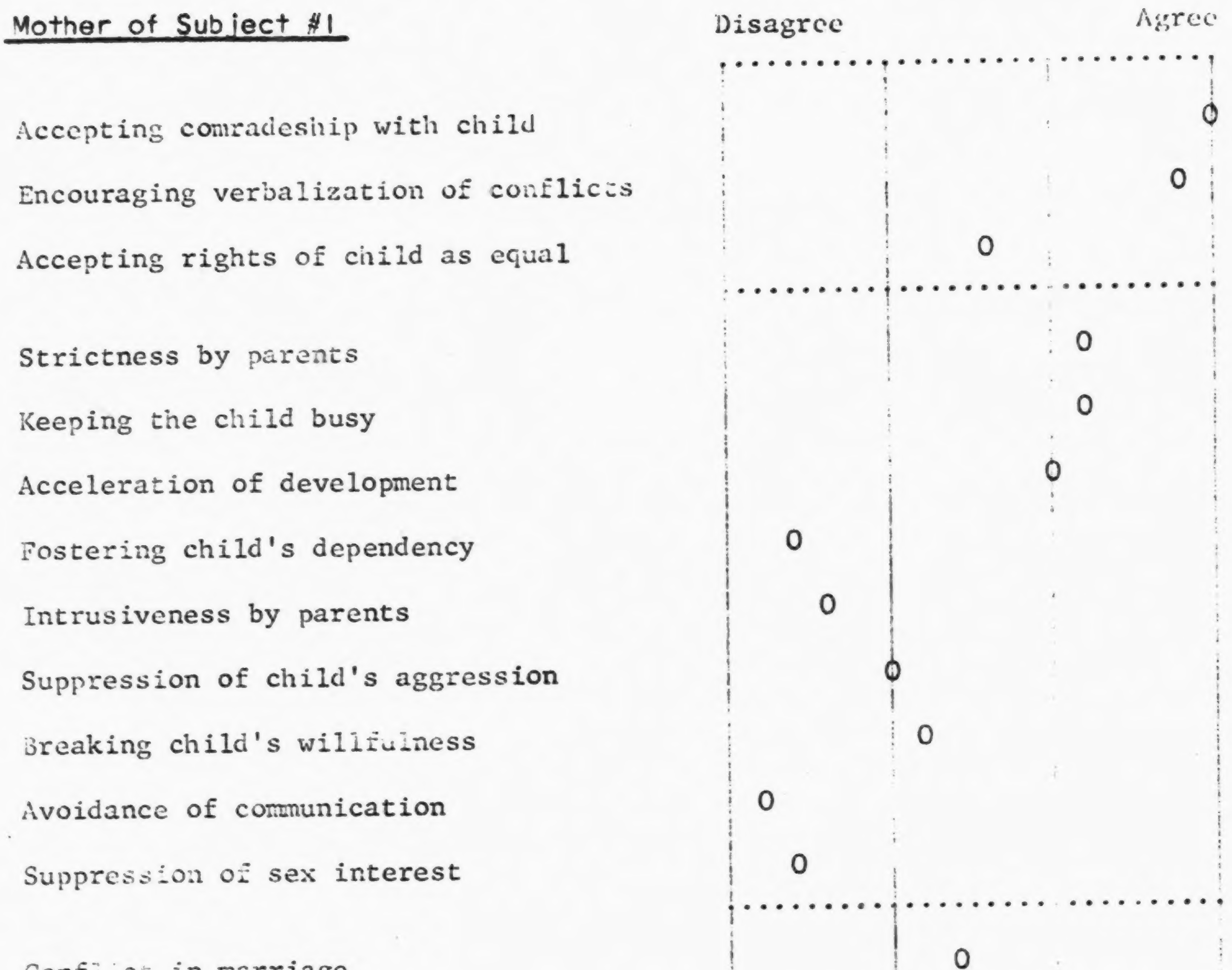
A mother must expect to give up her own happiness for that of her child.

Few woman get the gratitude they deserve for all they have done for their children.

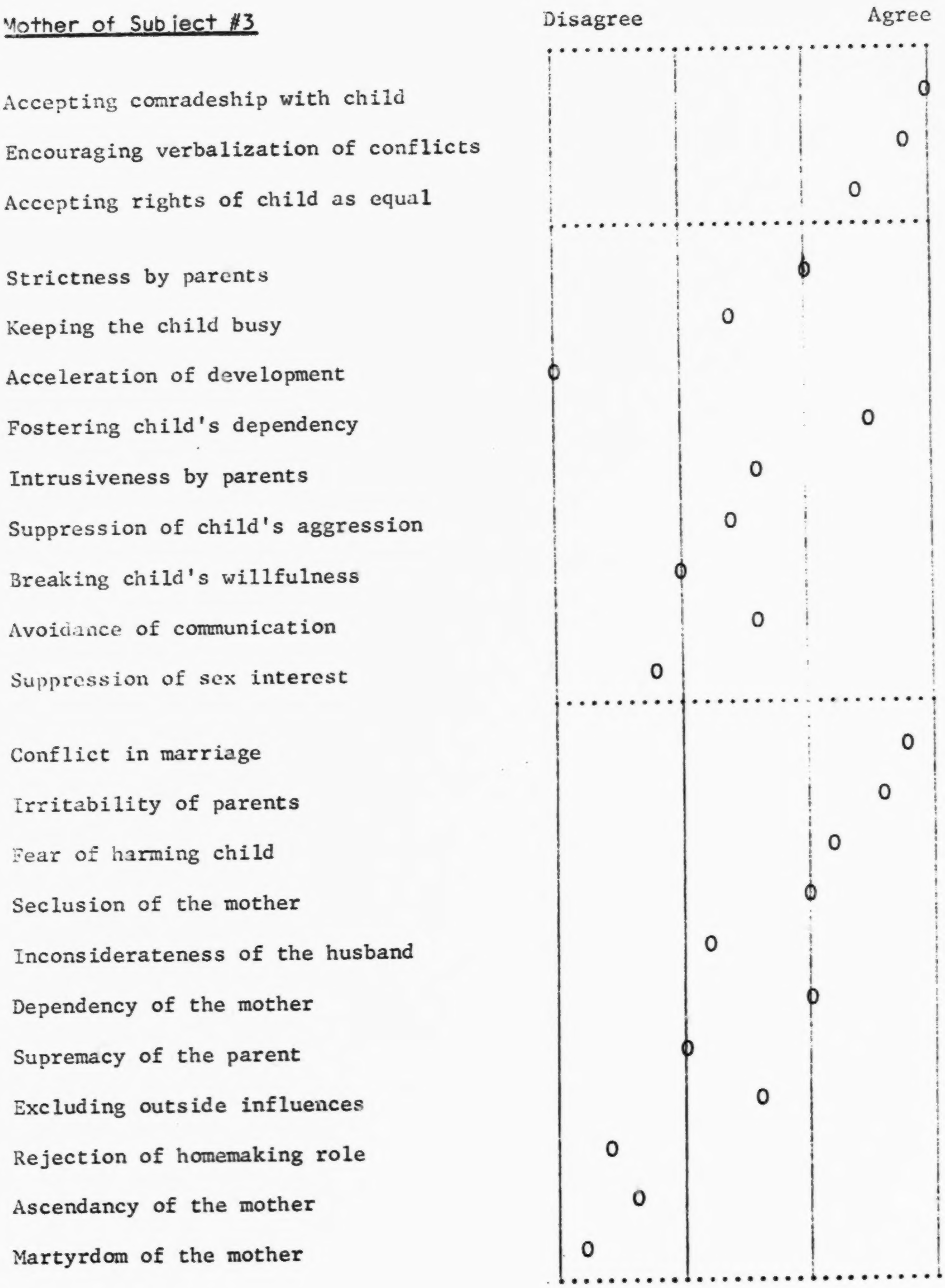
Children should be more considerate of their mothers since their mothers suffer so much for them.

Mothers sacrifice almost all their own fun for their children.

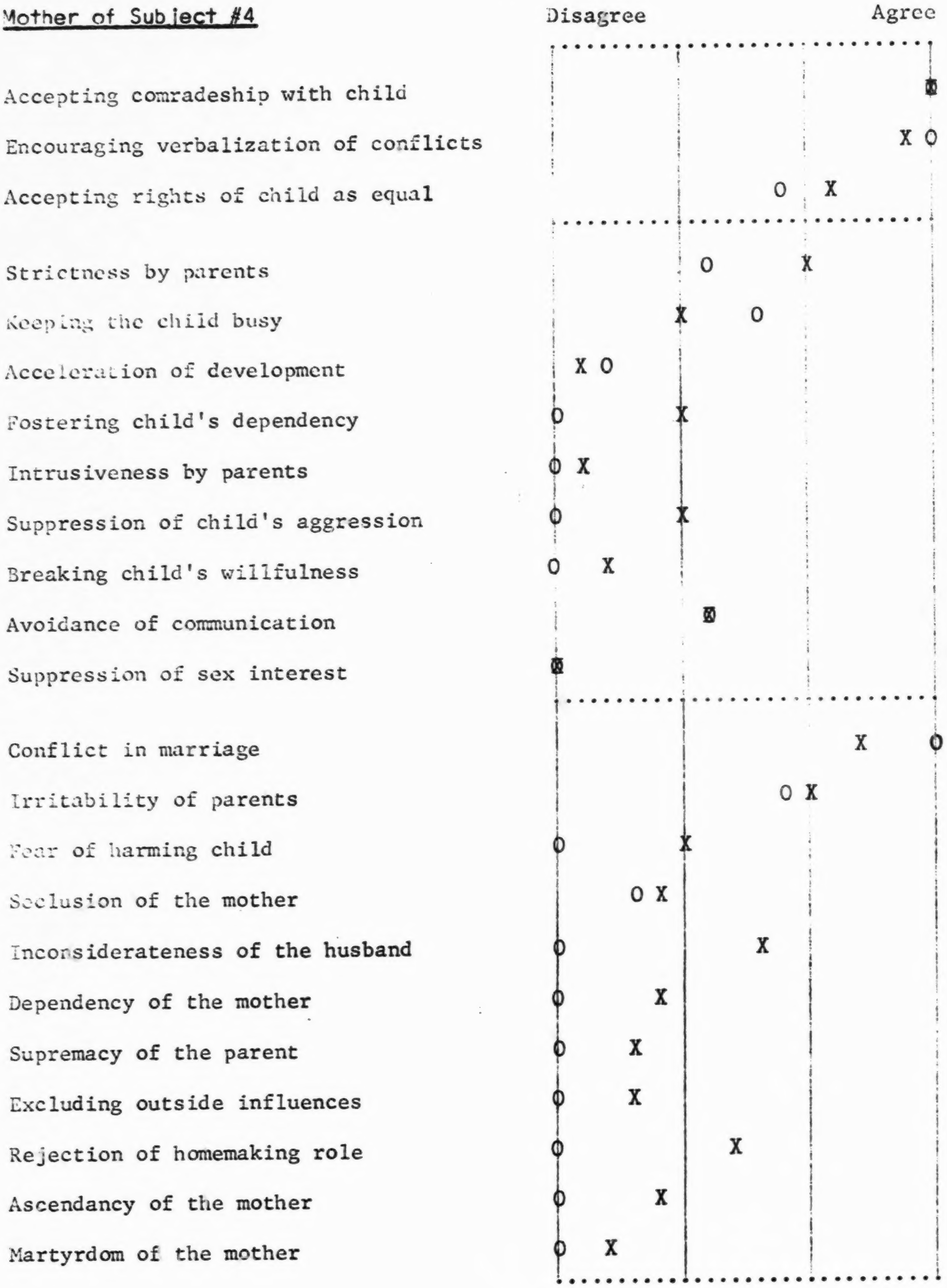
Mother of Subject #1



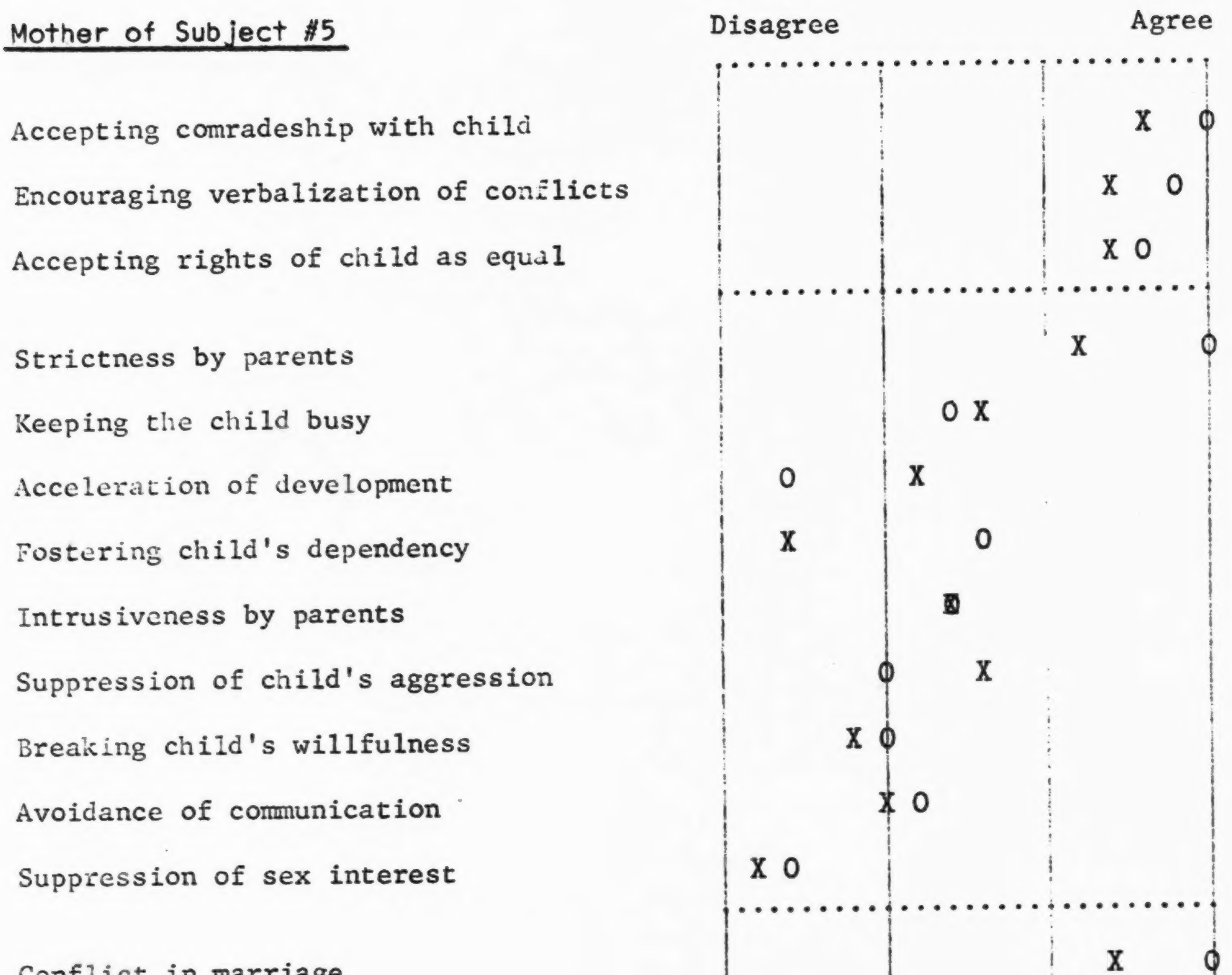
Mother of Subject #3



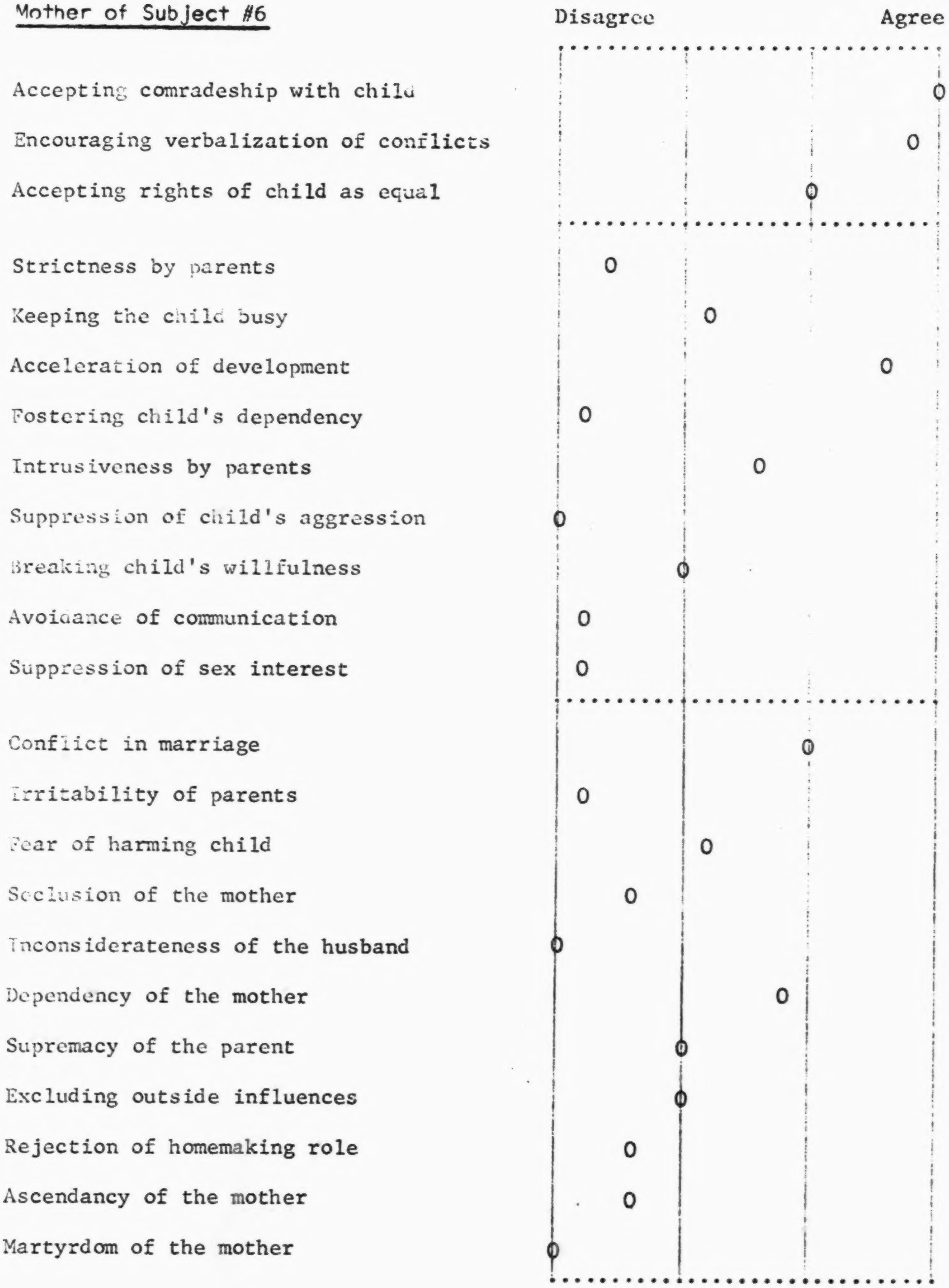
Mother of Subject #4



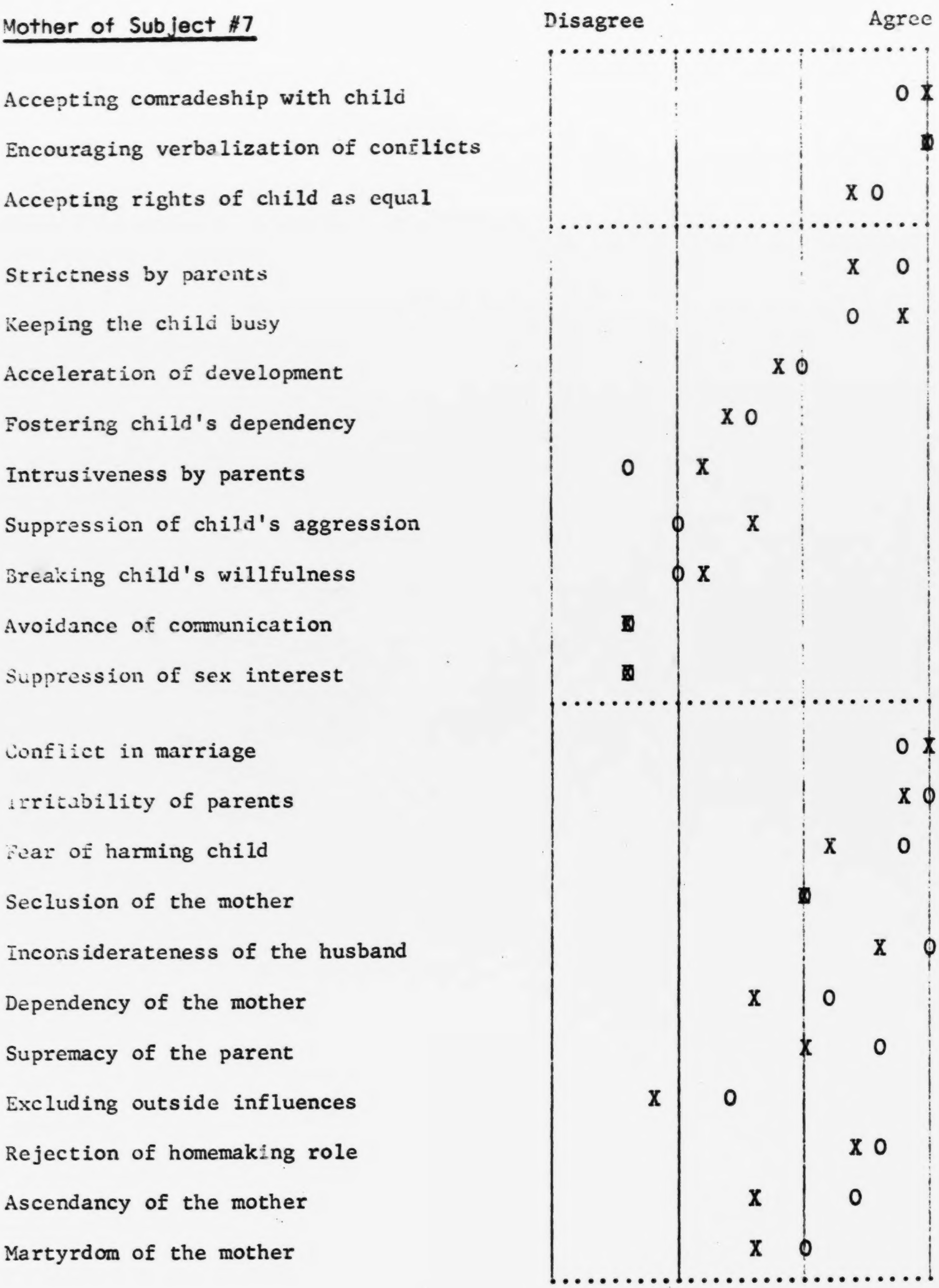
Mother of Subject #5



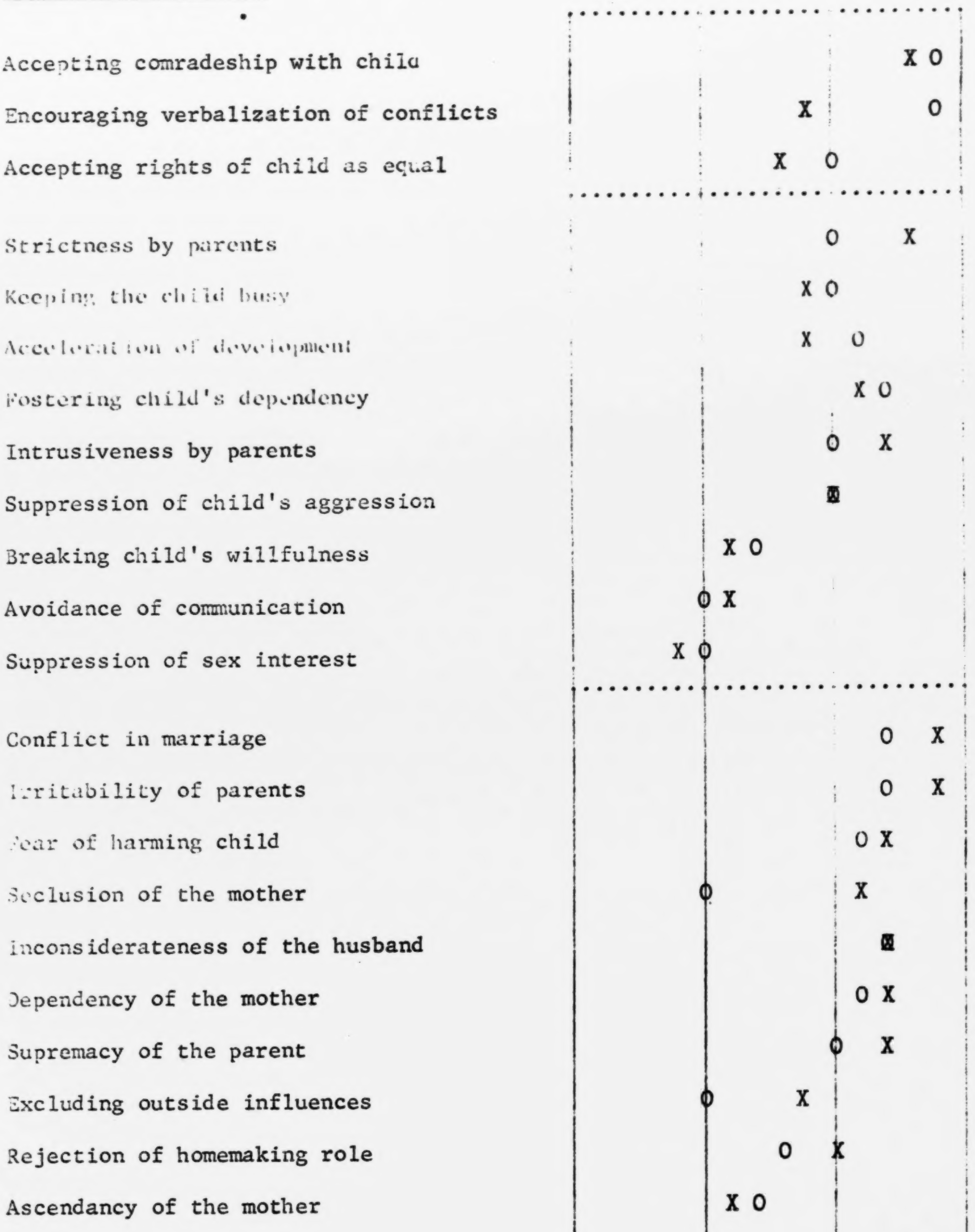
Mother of Subject #6



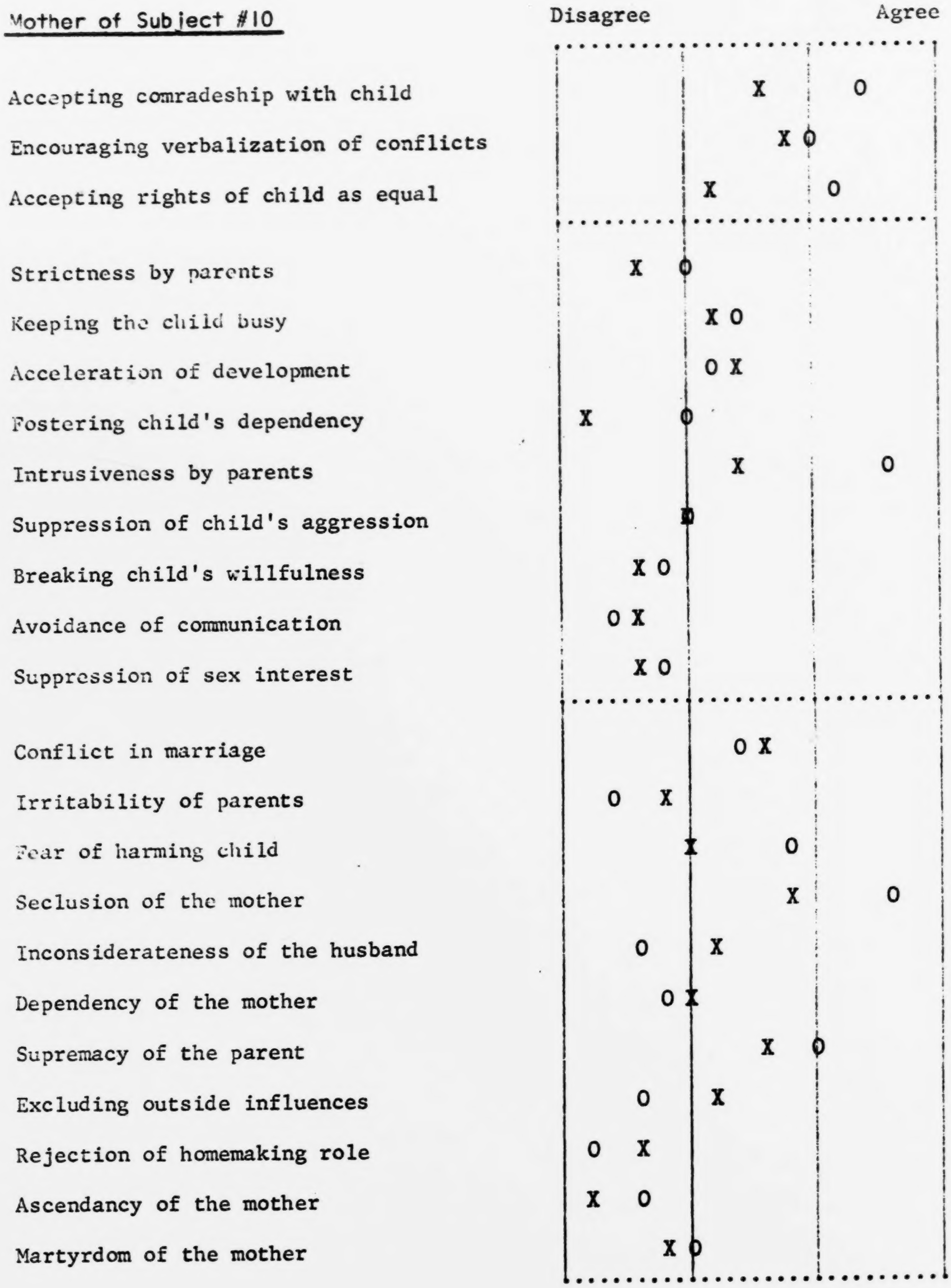
Mother of Subject #7



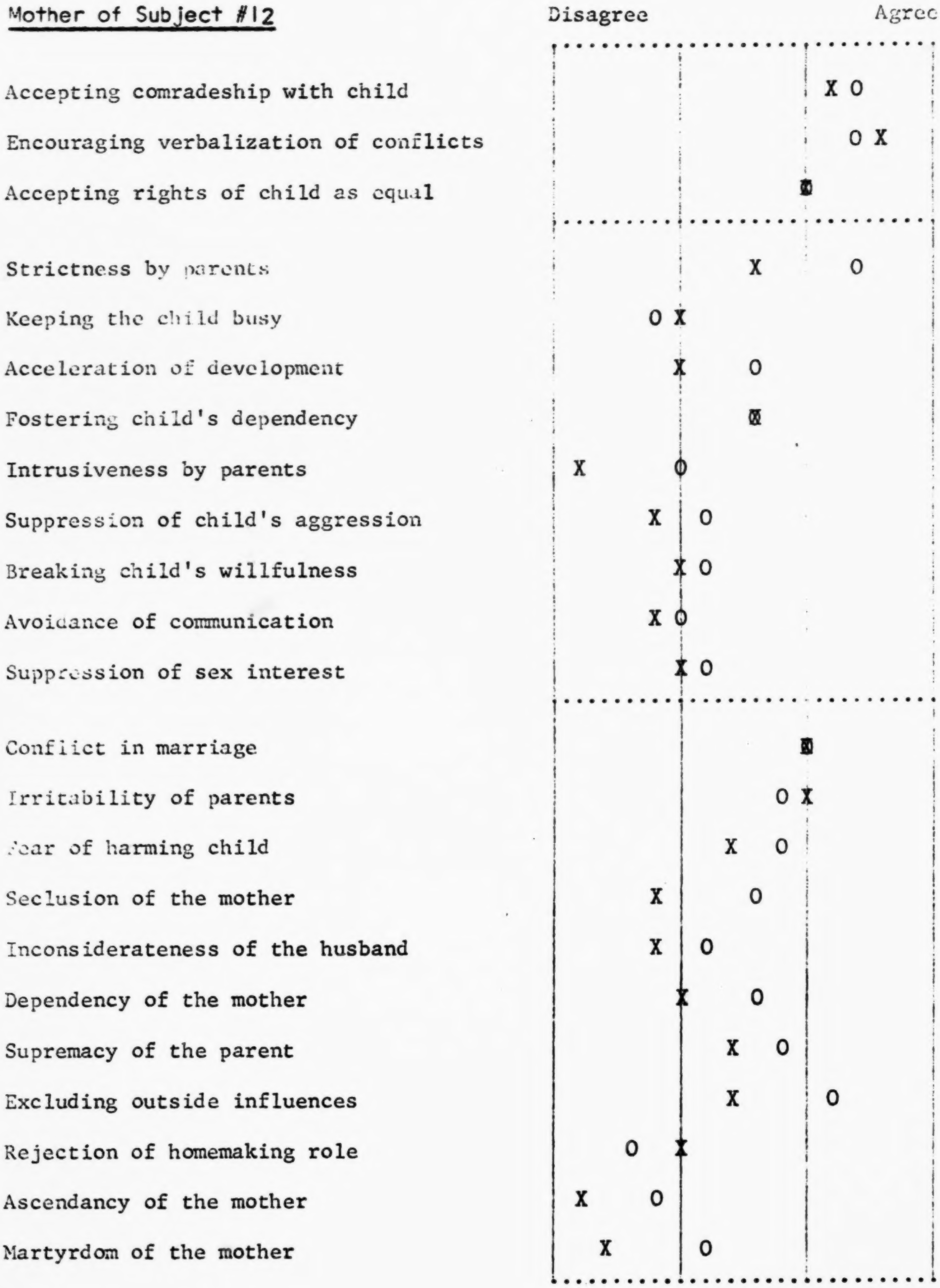
Mother of Subject #9



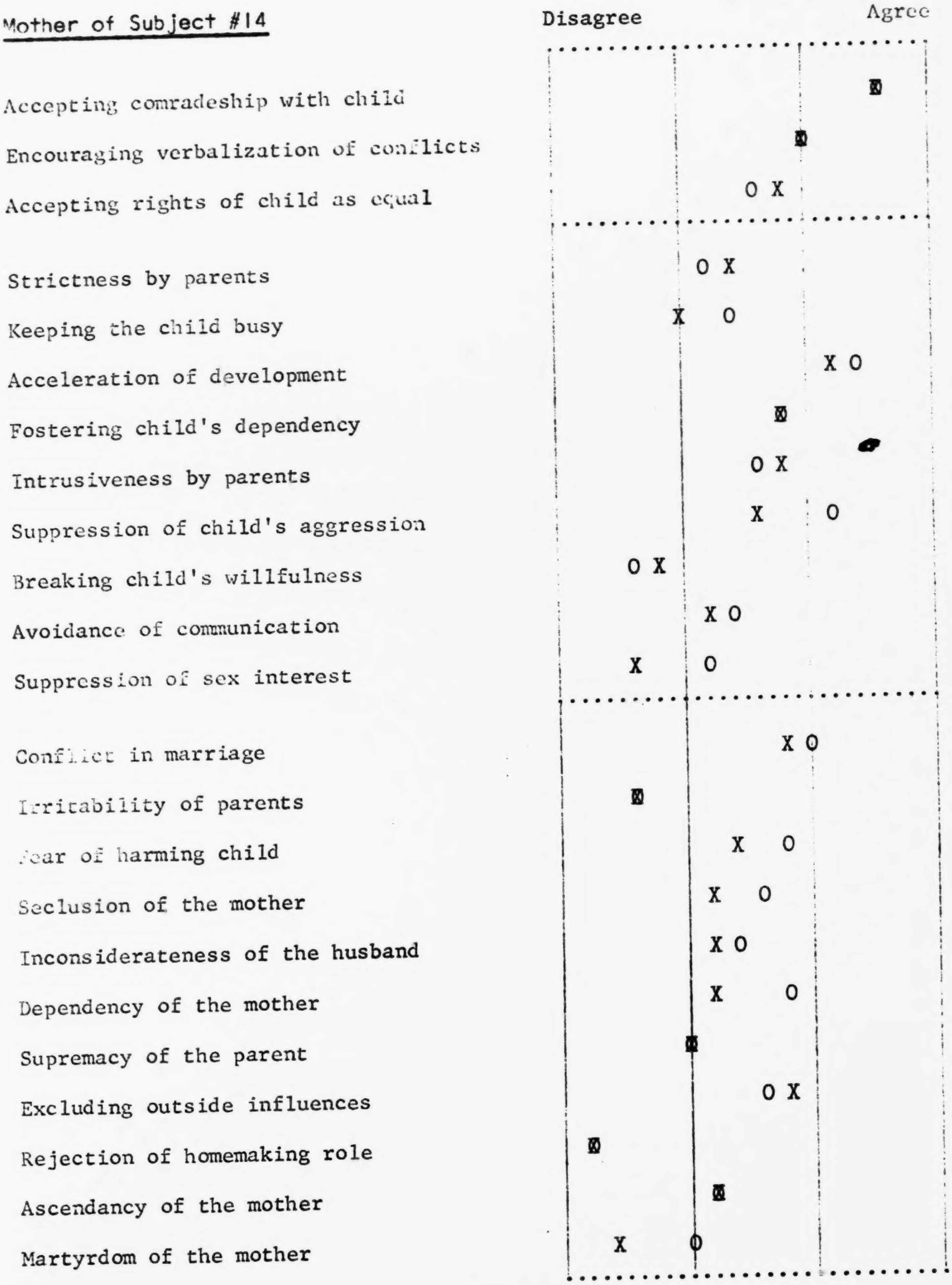
Mother of Subject #10



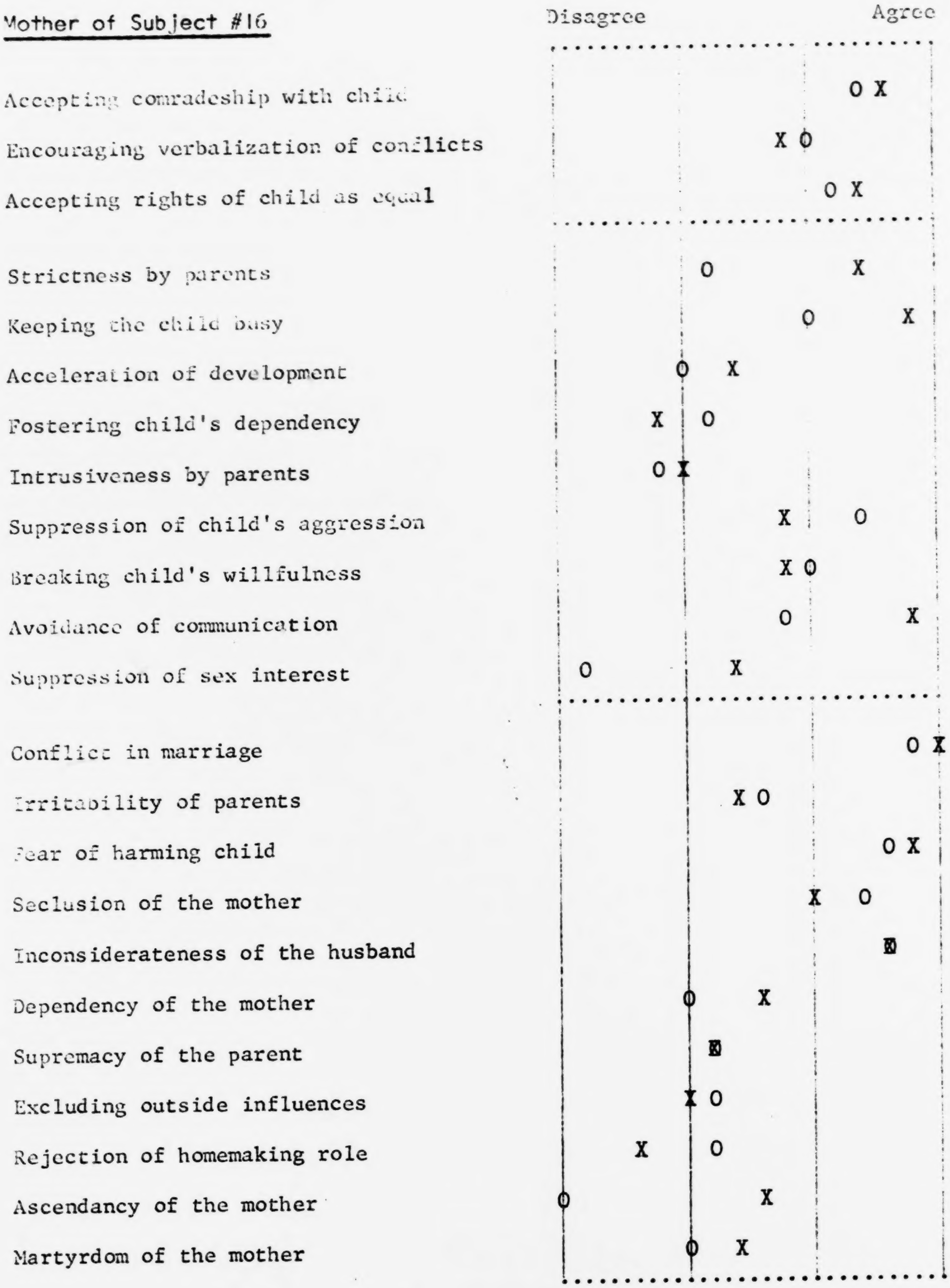
Mother of Subject #12



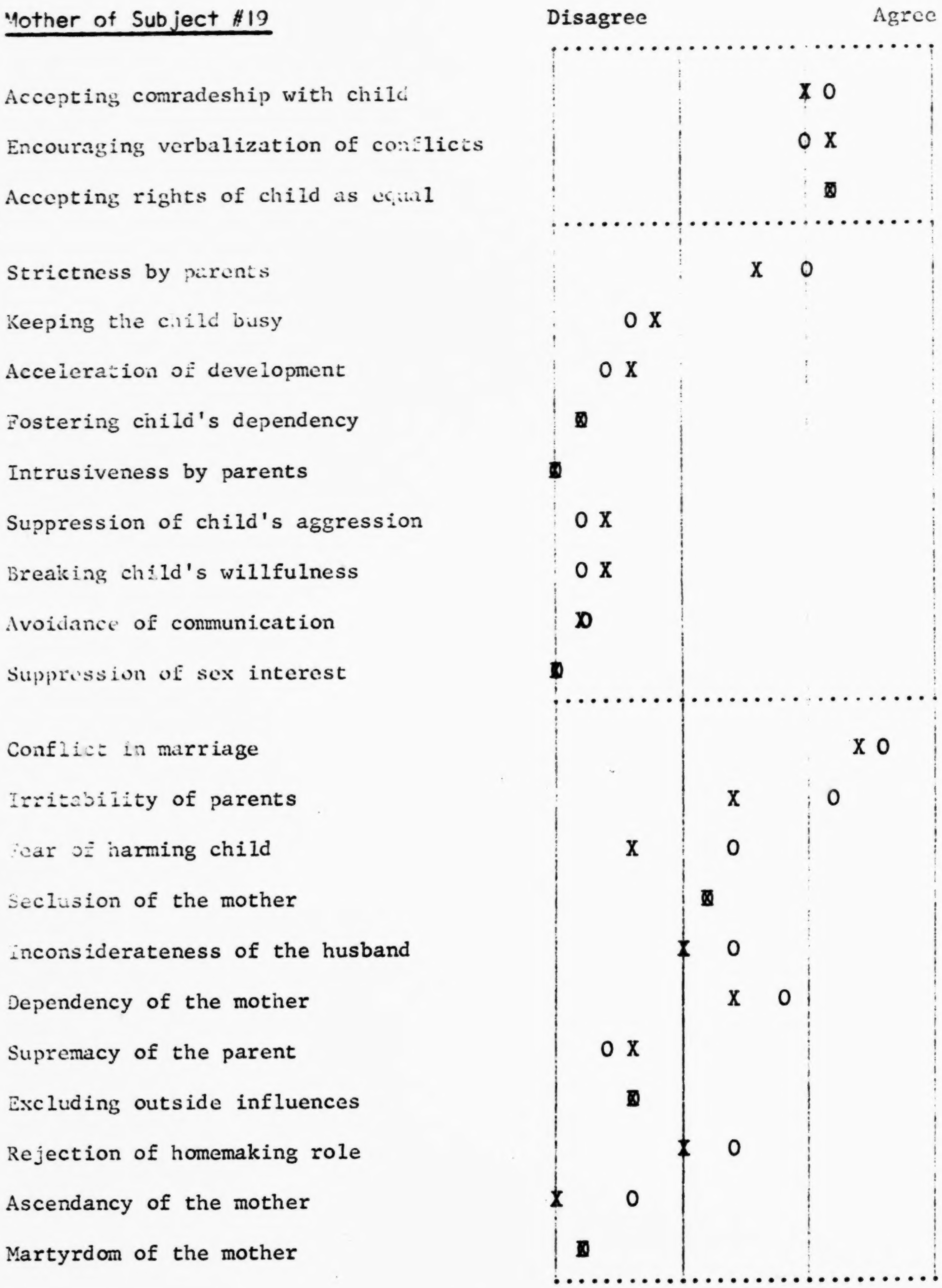
Mother of Subject #14



Mother of Subject #16



Mother of Subject #19



APPENDIX E

CALIFORNIA PSYCHOLOGICAL INVENTORY (CPI) PROFILES OF PARENTS

CALIFORNIA PSYCHOLOGICAL INVENTORY SCALE DESCRIPTIONS

Class I. MEASURES OF POISE, ASCENDENCY, AND SELF-ASSURANCE

1. Dominance (Do)

To assess factors of leadership ability, dominance, persistence, and social initiative. HIGH SCORERS: agressive, confident, outgoing, planful, having initiative; verbally fluent, self-reliant. LOW SCORERS: retiring, inhibited, commonplace, indifferent, silent, slow in thought and action; avoiding situations of tension and decision; lacking in self-confidence.

2. Capacity for status (Cs)

To serve as an index of an individual's capacity for status (not his actual or achieved status). The scale attempts to measure the personality qualities and attributes which underlie and lead to status. HIGH SCORERS: active, ambitious, forceful, insightful, resourceful, and versatile; ascentant and self-seeking; effective in communication; having personal scope and breadth of interests. LOW SCORERS: apathetic, shy conventional, dull, simple, and slow; stereotyped in thinking; restricted in outlook and interests; uneasy and awkward in new or unfamiliar social situations.

3. Sociability (Sy)

To identify persons of outgoing, sociable, participative temperament. HIGH SCORERS: confident enterprising, ingenious, and outgoing; competitive and forward; original and fluent in thought. LOW SCORERS: awkward, conventional quiet, submissive; detached and passive in attitude; suggestible and overly influenced by others' reactions and opinions.

4. Social presence (Sp)

To assess factors such as poise, spontaneity, and self-confidence in personal and social interaction. HIGH SCORERS: clever, enthusiastic, imaginative, quick, informal, spontaneous, active, and vigorous; having an expressive, ebullient nature. LOW SCORERS: deliberate, moderate, patient, self-restrained, and simple; vaccillating and uncertain in decision; literal and unoriginal in thinking and judging.

5. Self-acceptance (Sa)

To assess factors such as sense of personal worth, self-acceptance, and capacity for independent thinking and action. HIGH SCORERS: intelligent, outspoken, cool, versatile, witty, aggressive, and self-centered; possessing self-confidence and self-assurance. LOW SCORERS: methodical, conservative, dependable, conventional, easy-going and quiet; self-abasing and given to feelings of guilt and self-blame; passive in action and narrow in interests.

6. Sense of well-being (Wb)

To identify persons who minimize their worries and complaints, and who are relatively free from self-doubt and disillusionment. HIGH SCORERS: ambitious, alert, and versatile; productive and active; valuing work and effort for its own sake. LOW SCORERS: unambitious, leisurely, cautious, apathetic, and conventional; self-defensive and apologetic; constricted in thought and action.

Class II. MEASURES OF SOCIALIZATION, MATURITY, AND RESPONSIBILITY

7. Responsibility (Re)

To identify persons of conscientious, responsible, and dependable disposition and temperament. HIGH SCORERS: responsible, thorough, progressive, capable, dignified, and independent; conscientious and dependable; alert to ethical and moral issues. LOW SCORERS: awkward, changeable, immature, moody, lazy, and disbelieving; influenced by personal bias, spite, and dogmatism; under-controlled and impulsive in behavior.

8. Socialization (So)

To indicate the degree of social maturity, probity, and rectitude which the individual has attained. HIGH SCORERS: honest, industrious, obliging, sincere, modest, steady, conscientious, and responsible; self-denying and conforming. LOW SCORERS: defensive, demanding, opinionated, resentful, headstrong, rebellious, and undependable; guileful and deceitful; given to excess, ostentation, and exhibition in behavior.

9. Self-control (Sc)

To assess the degree and adequacy of self-regulation and self-control and freedom from impulsivity and self-centeredness. HIGH SCORERS: calm, patient, practical, self-approving, thoughtful and deliberate; strict and thorough in their own work and in their expectations for others; honest and conscientious. LOW SCORERS: impulsive, shrewd, excitable, irritable, self-centered, and uninhibited; aggressive and assertive; overemphasizing personal pleasure and self-gain.

10. Tolerance (To)

To identify persons with permissive, accepting and non-judgmental social beliefs and attitudes. HIGH SCORERS: enterprising, informal, quick, tolerant, clear-thinking, resourceful; intellectually able; having broad and varied interests: LOW SCORERS: inhibited, aloof, wary and retiring; passive and overly judgmental in attitude; disbelieving and distrustful in personal and social outlook.

11. Good impression (Gi)

To identify persons capable of creating a favorable impression, and who are concerned about how others react to them. HIGH SCORERS: cooperative, enterprising, outgoing, warm and helpful: diligent and persistent. LOW SCORERS: inhibited, shrewd, wary, and resentful; cool and distant in their relationships; self-centered and too little concerned with the needs and wants of others.

12. Communality (Cm)

To indicate the degree to which an individual's reactions and responses correspond to the modal ("common") pattern established for the inventory. HIGH SCORERS: moderate, tactful, reliable, sincere, patient, steady, and realistic; honest and conscientious; having common sense and good judgment. LOW SCORERS: impatient, changeable, complicated, nervous, restless, and confused; guileful and deceitful; inattentive and forgetful; having internal conflicts.

Class III. MEASURES OF ACHIEVEMENT POTENTIAL AND INTELLECTUAL EFFICIENCY

13. Achievement via conformance (Ac)

To identify those factors of interest and motivation which facilitate achievement in any setting where conformance is a positive behavior. HIGH SCORERS: capable, cooperative, organized, responsible, stable, and sincere; persistent and industrious; valuing intellectual activity and achievement. LOW SCORERS: course, stubborn, awkward, insecure, and opinionated; easily disorganized under stress or pressures to conform; pessimistic about their occupational futures.

14. Achievement via independence (Ai)

To identify those factors of interest and motivation which facilitate achievement in any setting where autonomy and independence are positive behaviors. HIGH SCORERS: mature, forceful, dominant, demanding, and foresighted; independent and self-reliant; having superior intellectual ability and judgment. LOW SCORERS: inhibited, anxious, cautious, dissatisfied, dull; submissive and compliant before authority; lacking in self-insight and self-understanding.

15. Intellectual efficiency (Le)

To indicate the degree of personal and intellectual efficiency which the individual has attained. HIGH SCORERS: efficient, clear-thinking, intelligent, progressive, thorough, and resourceful; alert and well-informed; placing a high value on intellectual matters. LOW SCORERS: confused, cautious, easy-going, defensive, shallow, and unambitious; conventional and stereotyped in thinking; lacking in self-direction and self-discipline.

Class IV. MEASURES OF INTELLECTUAL AND INTEREST MODES

16. Psychological-mindedness (Py)

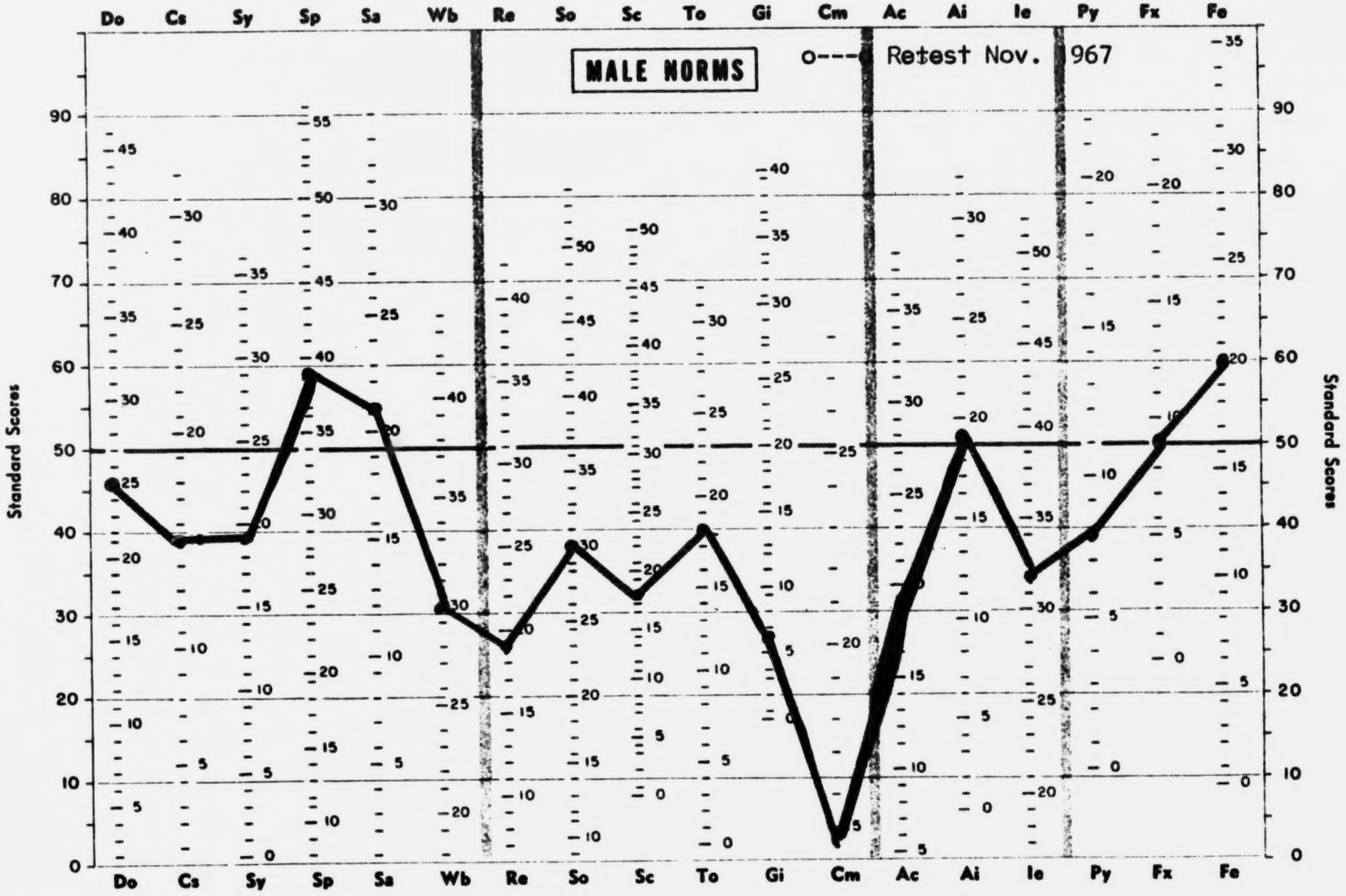
To measure the degree to which the individual is interested in, and responsive to, the inner needs, motives, and experiences of others. HIGH SCORERS: outgoing, spontaneous, quick, resourceful, changeable; verbally fluent and socially ascendant; rebellious toward rules, restrictions, and constraints. LOW SCORERS: apathetic, serious, and unassuming; slow and deliberate in tempo; overly conforming and conventional.

17. Flexibility (Fx)

To indicate the degree of flexibility and adaptability of a person's thinking and social behavior. HIGH SCORERS: insightful, informal, adventurous, humorous, rebellious, idealistic, assertive, and egotistic; sarcastic and cynical; concerned with personal pleasure and diversion. LOW SCORERS: deliberate, worrying, industrious, guarded, mannerly, methodical, and rigid; formal and pedantic in thought; deferential to authority, custom, and tradition.

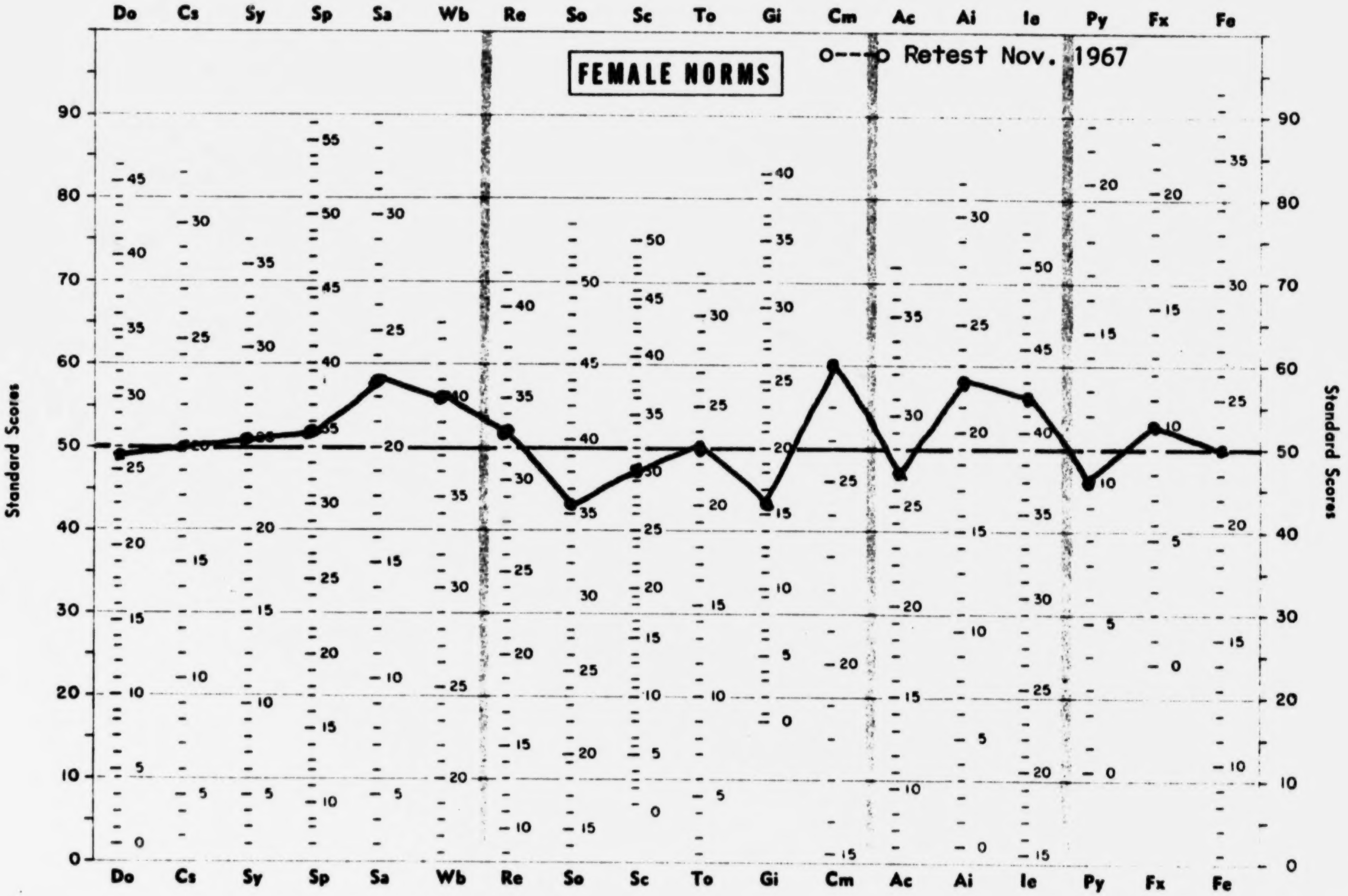
18. Femininity (Fe)

To assess the masculinity or femininity of interests. (High scores indicate more feminine interests, low scores more masculine.) HIGH SCORERS: appreciative, patient, helpful, gentle, moderate, persevering, and sincere; respectful and accepting of others; behaving in a conscientious and sympathetic way. LOW SCORERS: hardheaded, ambitious, masculine, active, robust, and restless; manipulative and opportunistic in dealing with others; blunt and direct in thinking and action; impatient with delay, indecision, and reflection.



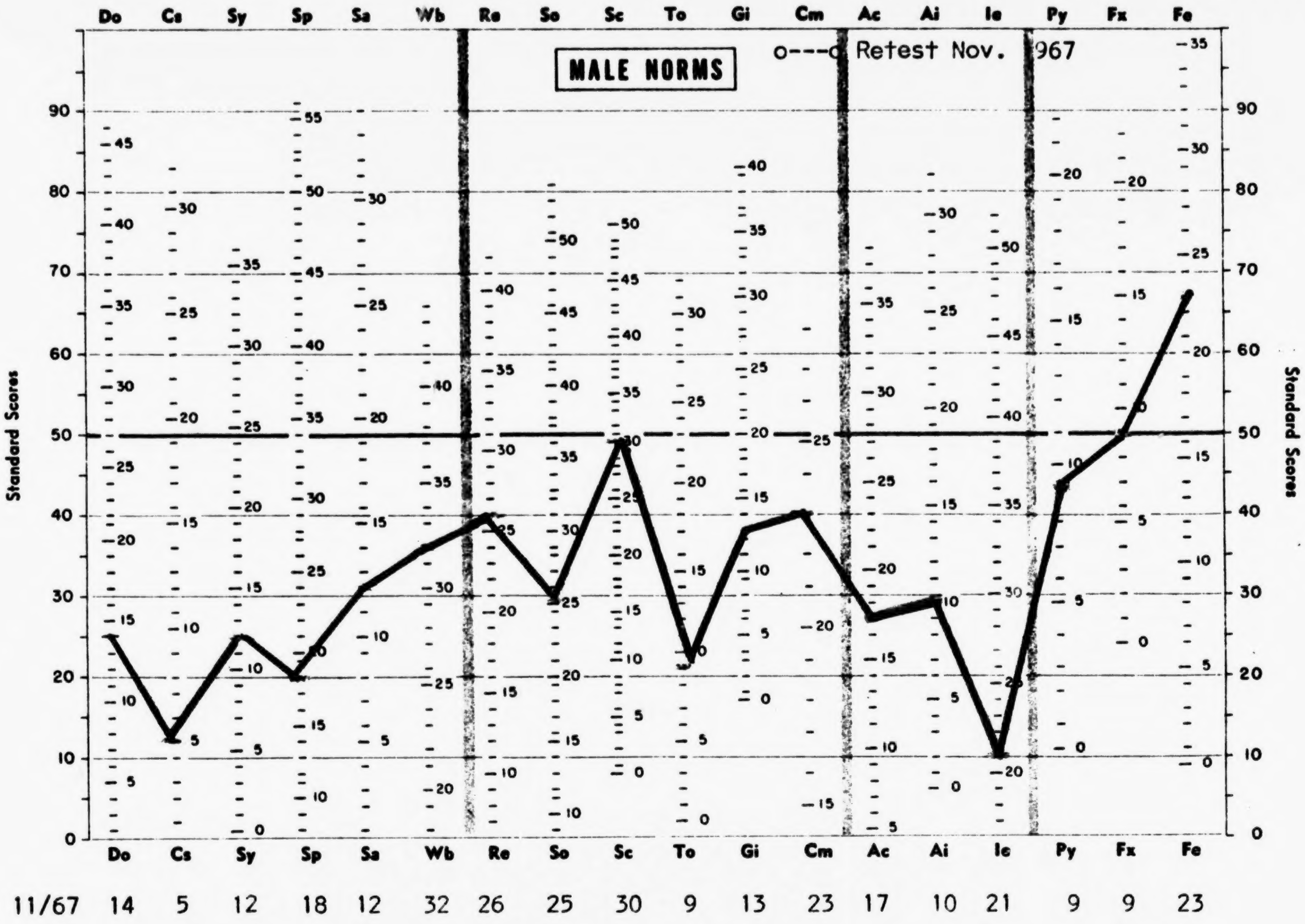
2/67 25 15 19 39 21 30 19 30 18 18 6 14 19 19 32 8 9 20

C. P. I. Profile of Father of Subject #1

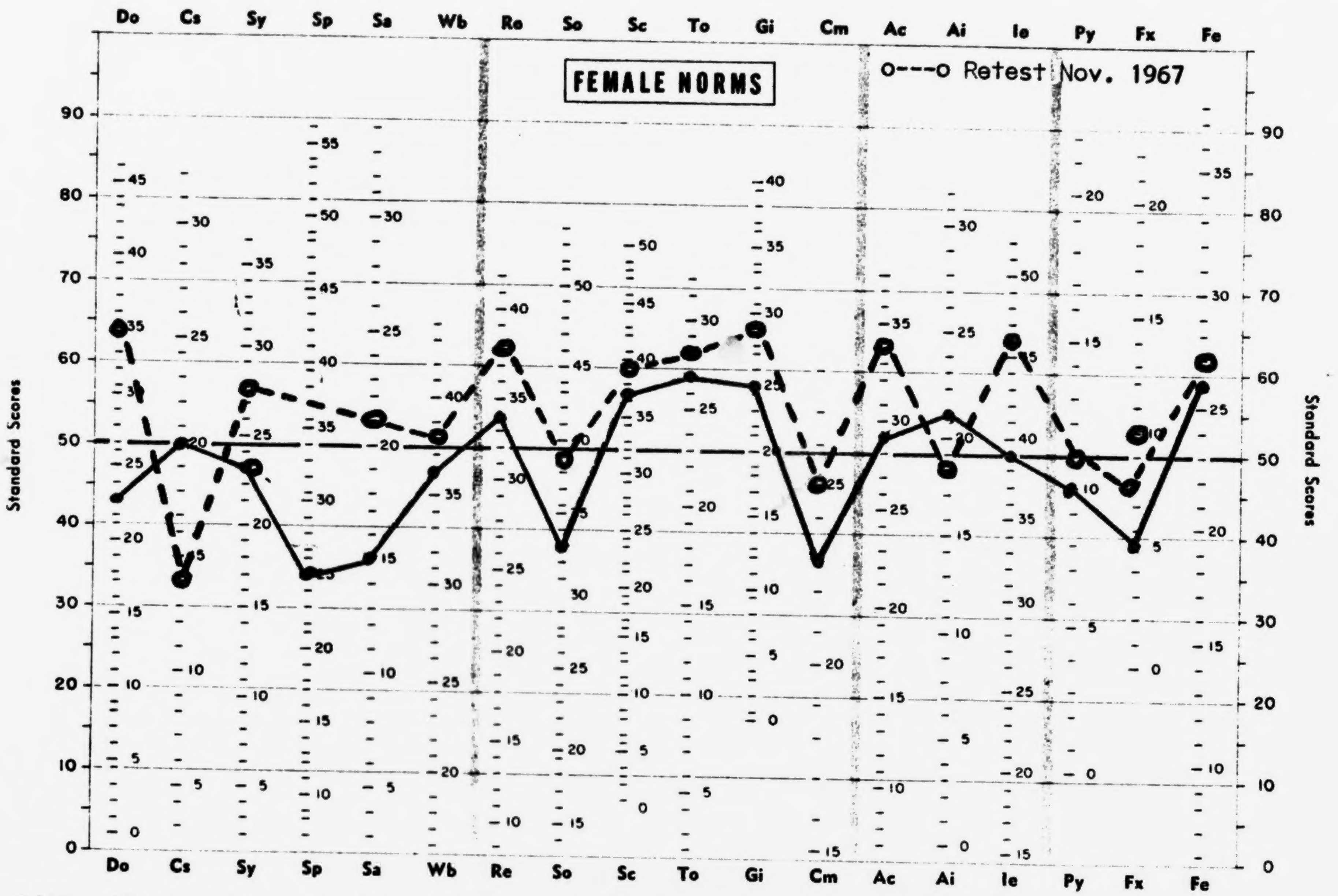


2/67 26 20 25 35 23 40 33 36 30 23 16 28 27 22 42 10 10 23

C. P. I. Profile of Mother of Subject #1

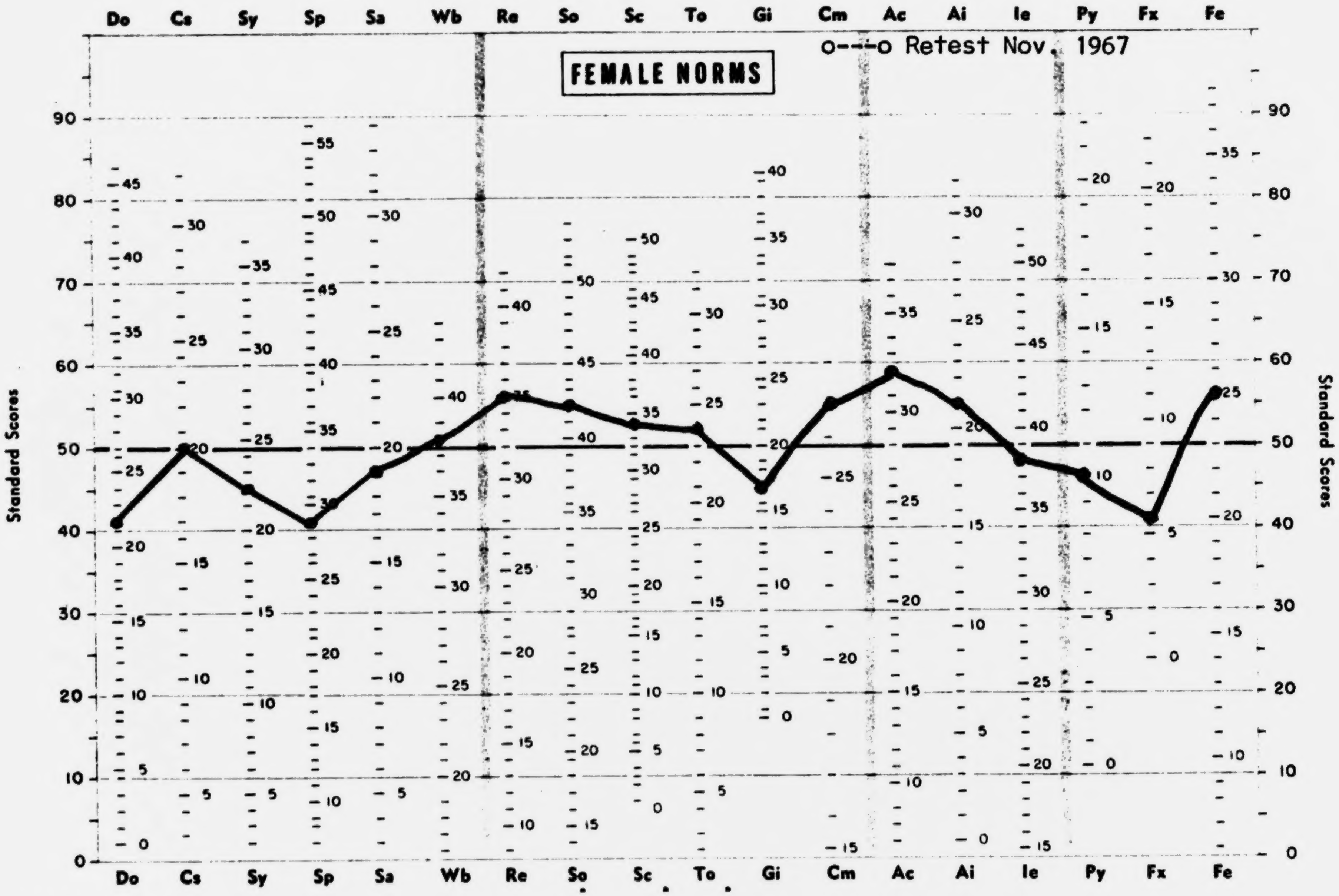


C. P. I. Profile of Father of Subject #2



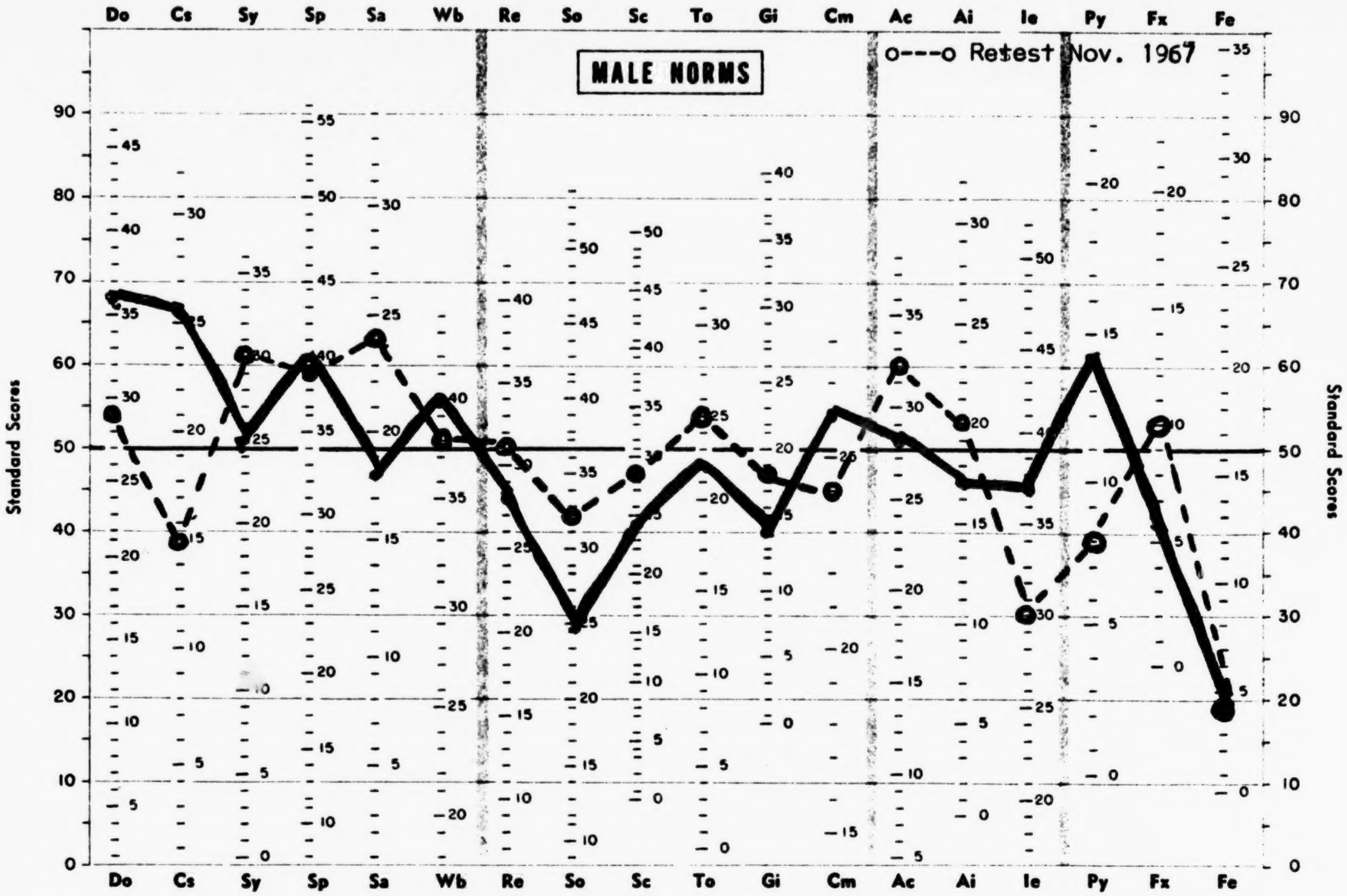
	Do	Cs	Sy	Sp	Sa	Wb	Re	So	Sc	To	Gi	Cm	Ac	Ai	Ie	Py	Fx	Fe
2/67	23	20	23	25	15	36	34	33	37	27	25	23	29	21	39	10	5	26
11/67	35	14	28	32	21	38	38	39	39	28	29	25	34	22	46	11	7	27

C. P. I. Profile of Mother of Subject #2



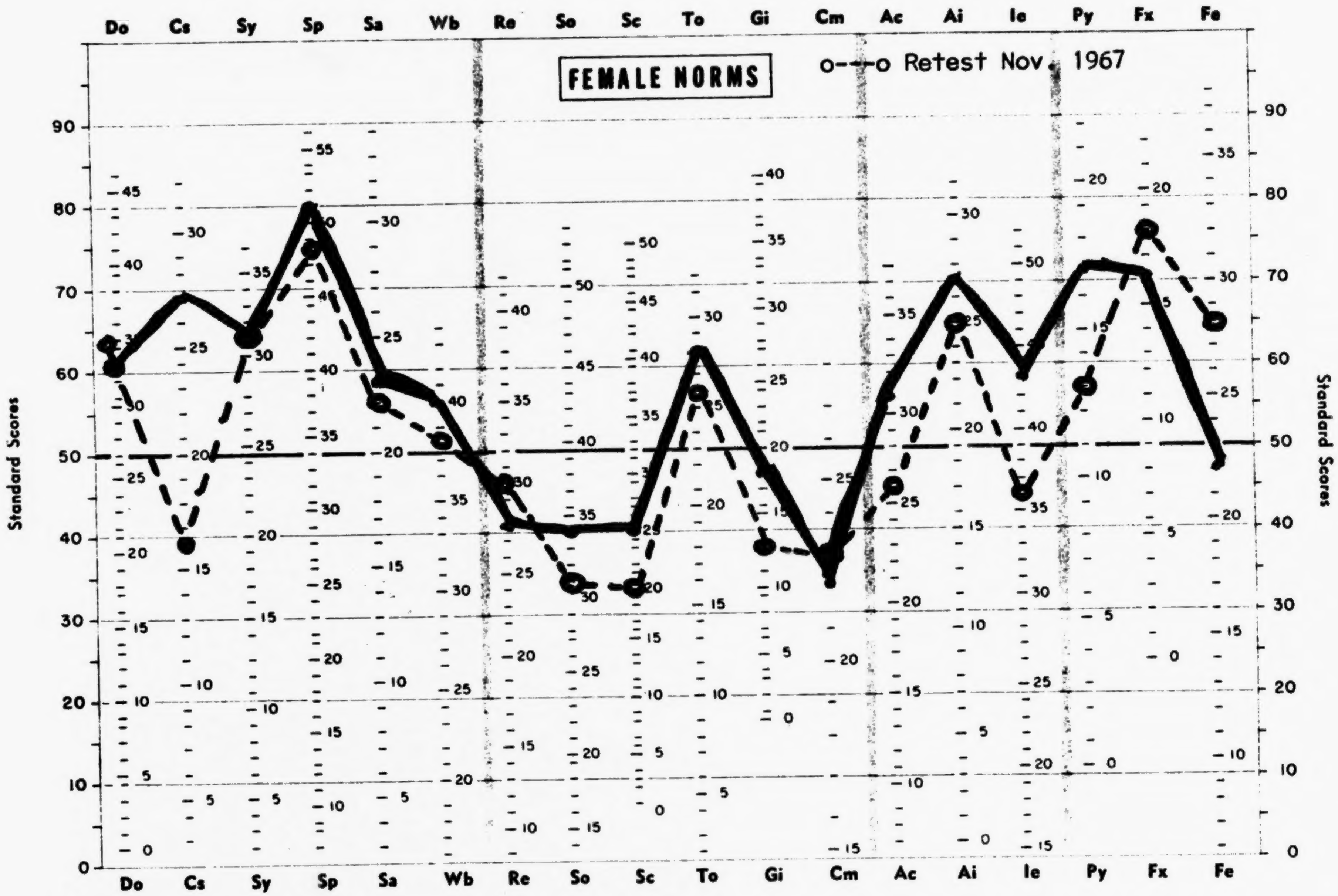
2/67 22 20 22 29 19 38 35 42 34 24 17 27 32 21 38 10 6 25

C. P. I. Profile of Mother of Subject #3



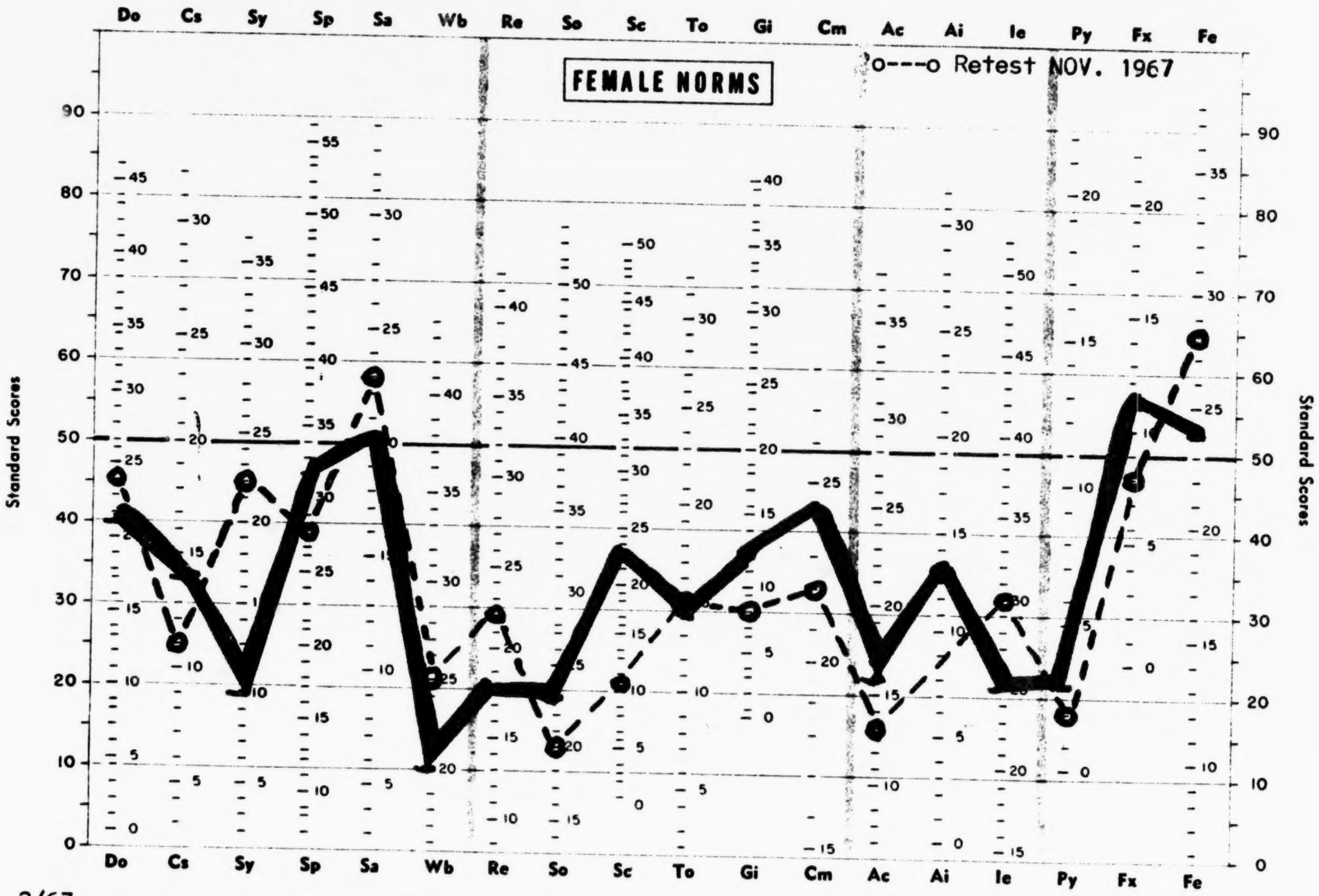
	Do	Cs	Sy	Sp	Sa	Wb	Re	So	Sc	To	Gi	Cm	Ac	Ai	Ie	Py	Fx	Fe
2/67	36	26	25	40	18	40	28	24	24	22	14	26	28	17	37	14	6	4
11/67	29	15	30	39	24	38	31	22	29	25	18	24	32	20	30	8	10	4

C. P. I. Profile of Father of Subject #4



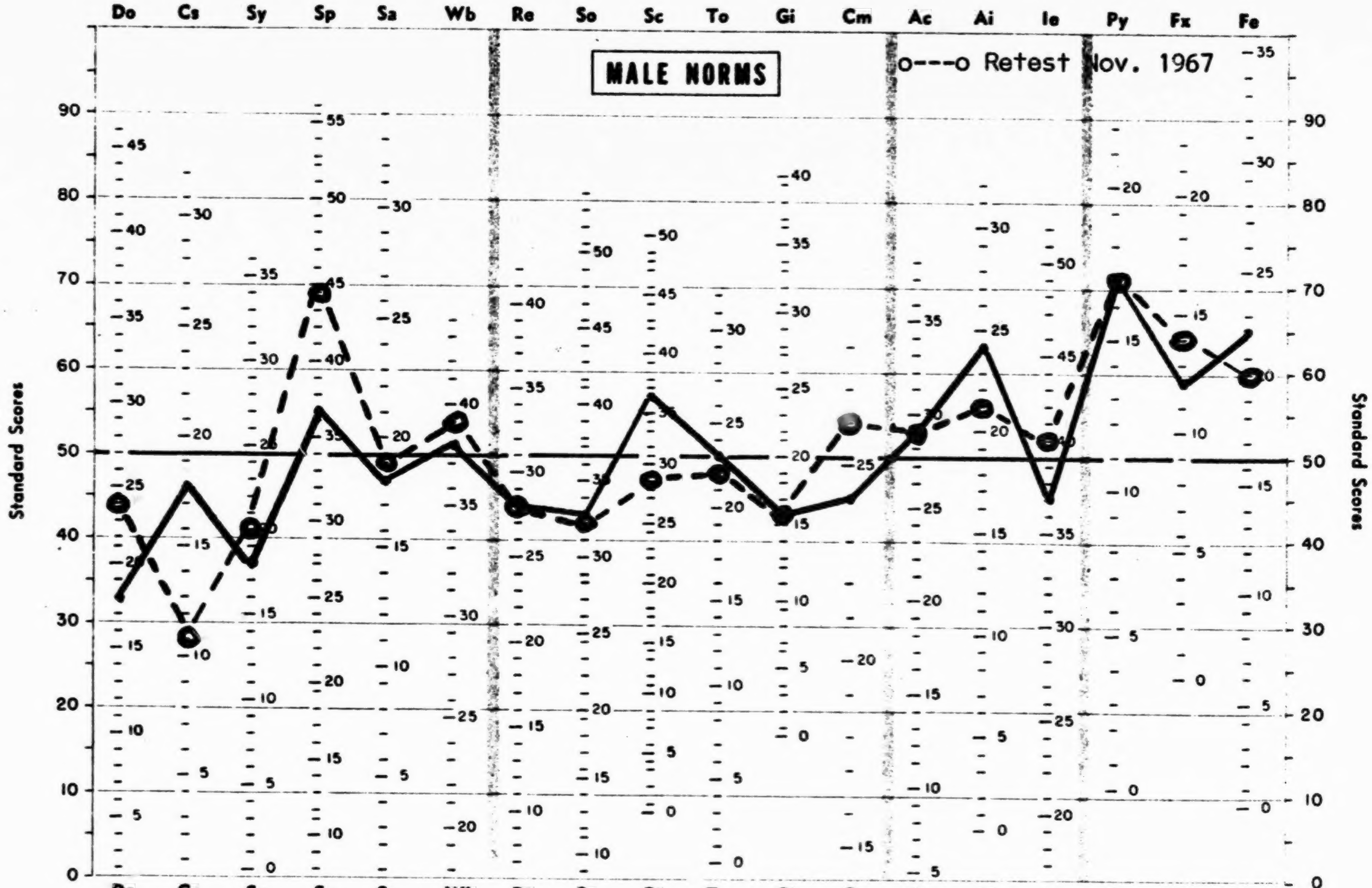
	Do	Cs	Sy	Sp	Sa	Wb	Re	So	Sc	To	Gi	Cm	Ac	Ai	Ie	Py	Fx	Fe
2/67	33	27	31	51	23	40	28	34	25	28	18	22	31	27	43	17	16	22
11/67	35	16	31	48	22	38	30	31	20	26	13	23	26	25	36	13	18	28

C. P. I. Profile of Mother of Subject #4.



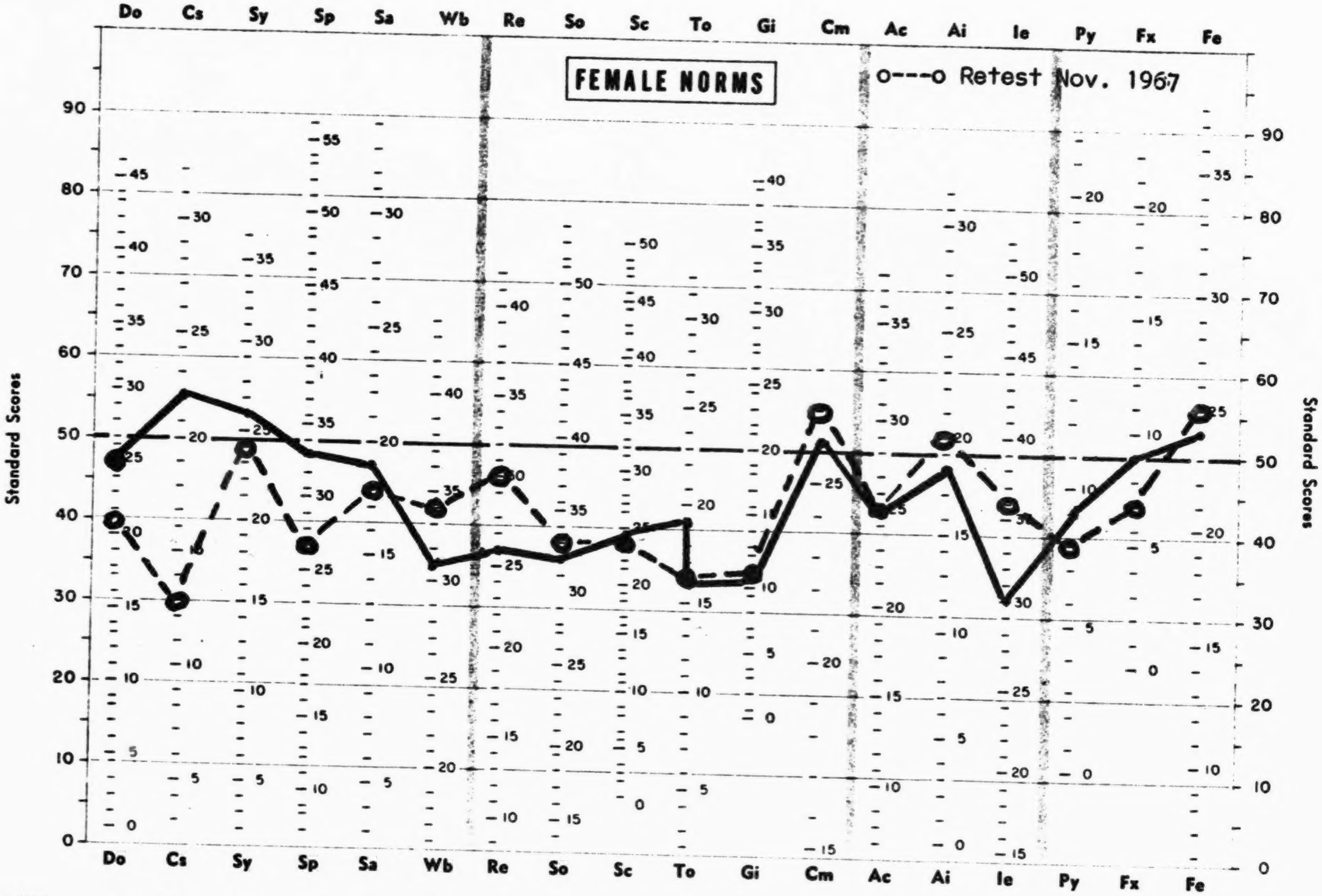
	Do	Cs	Sy	Sp	Sa	Wb	Re	So	Sc	To	Gi	Cm	Ac	Ai	Ie	Py	Fx	Fe
2/67	21	14	10	32	20	20	18	23	22	14	12	24	16	13	25	3	11	24
11/67	24	11	22	28	23	25	22	20	11	15	8	22	13	13	30	2	8	28

C. P. I. Profile of Mother of Subject #5



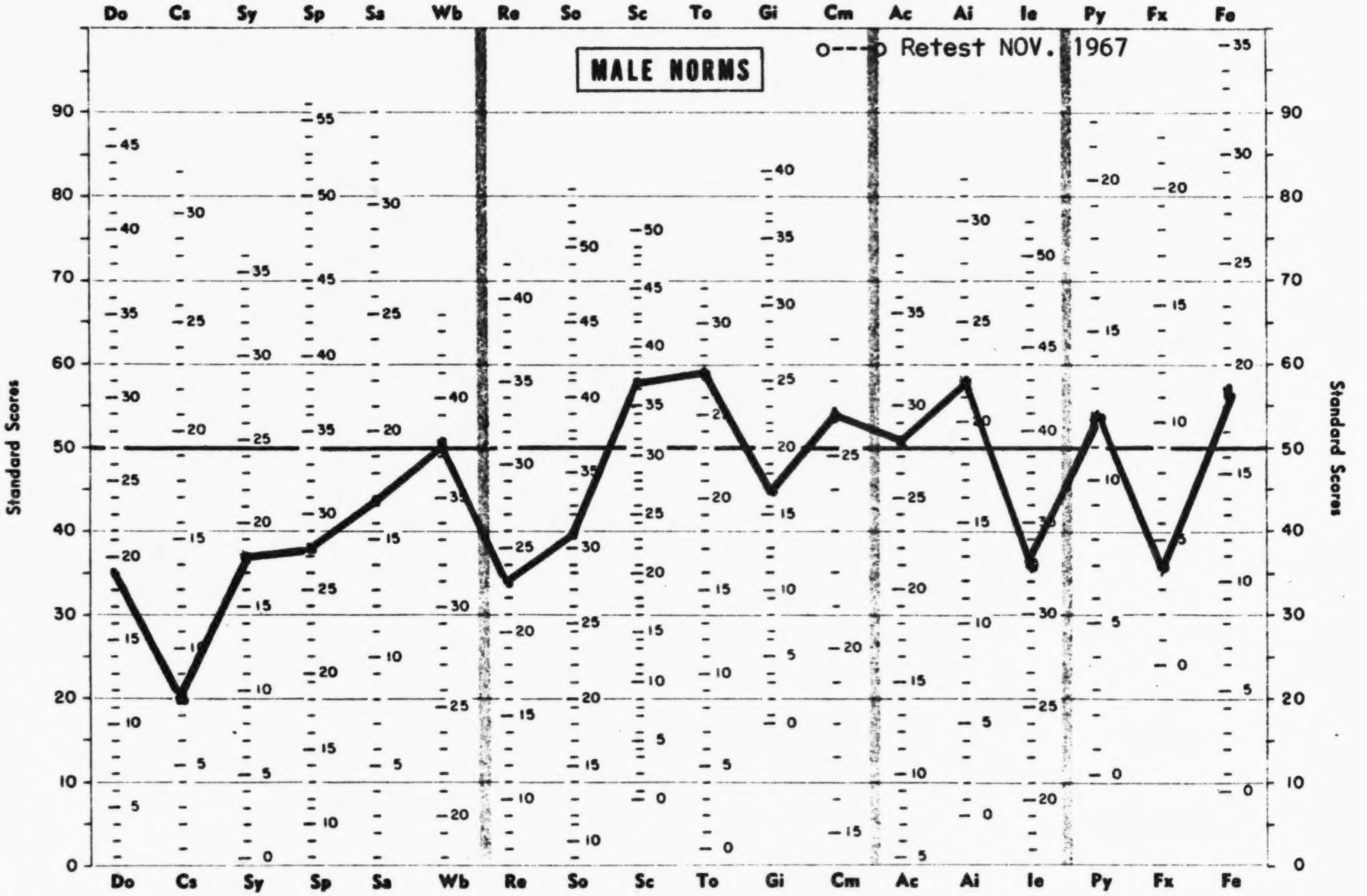
	Do	Cs	Sy	Sp	Sa	Wb	Re	So	Sc	To	Gi	Cm	Ac	Ai	Ie	Py	Fx	Fe
2/67	18	18	18	37	18	38	28	33	38	23	16	24	29	24	37	17	12	22
11/67	24	11	20	44	19	39	28	32	29	22	16	26	29	21	40	17	14	20

C. P. I. Profile of Father of Subject #7



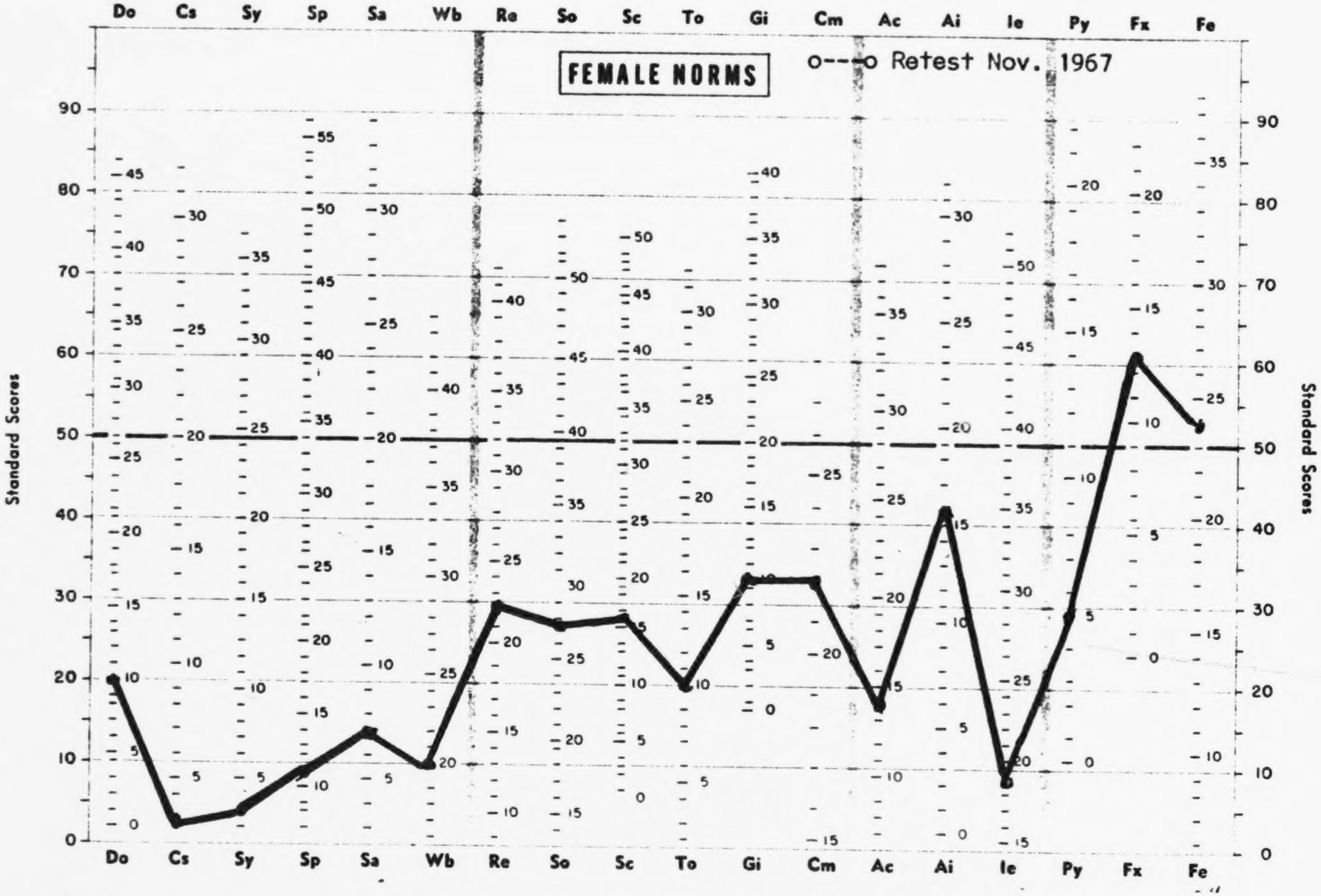
	Do	Cs	Sy	Sp	Sa	Wb	Re	So	Sc	To	Gi	Cm	Ac	Ai	Ie	Py	Fx	Fe
2/67	25	22	26	33	19	31	26	32	24	19	11	26	24	18	30	9	9	24
11/67	21	13	24	32	18	34	30	32	24	16	11	27	25	20	36	8	7	25

C. P. I. Profile of Mother of Subject #7



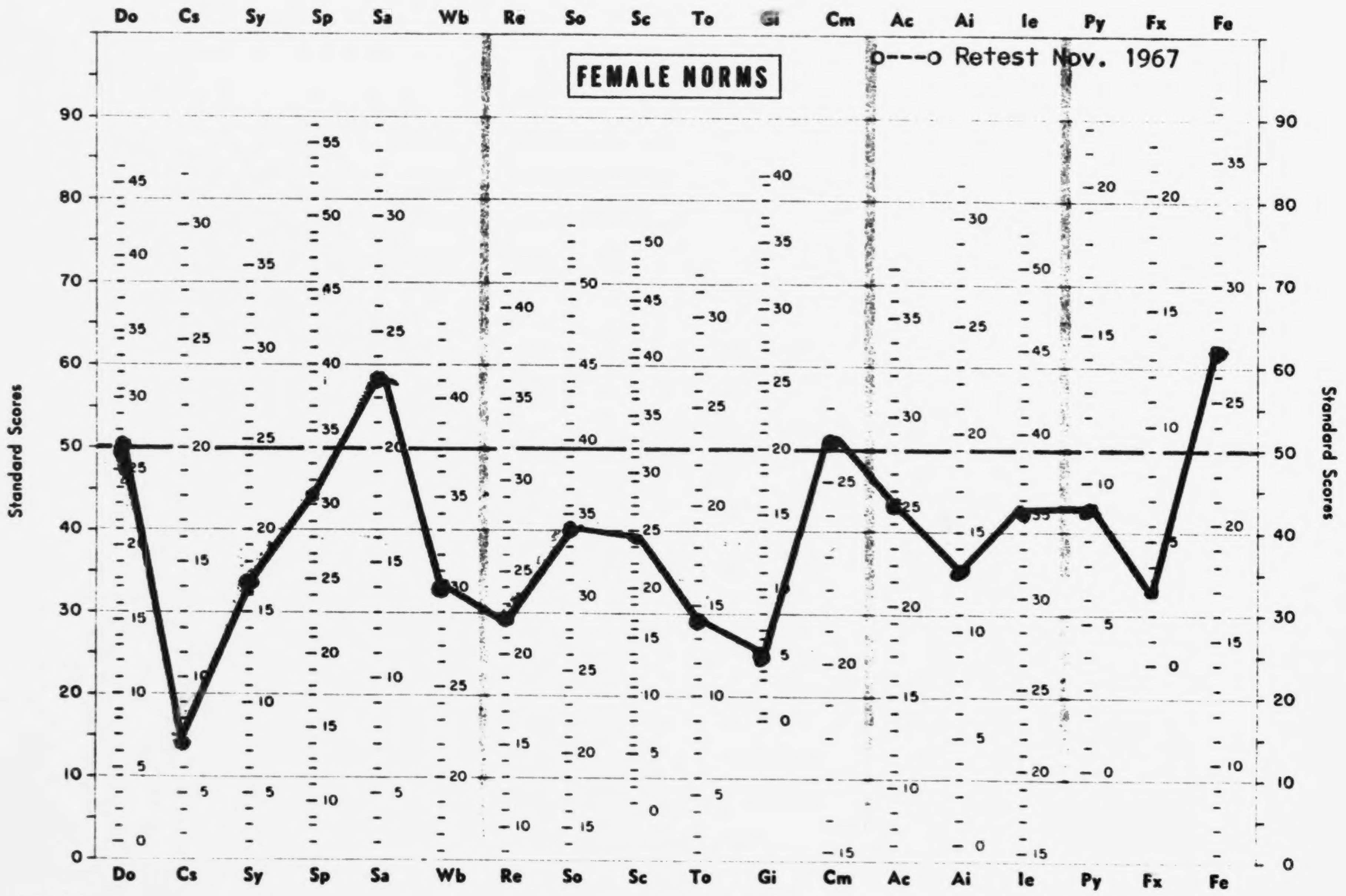
	Do	Cs	Sy	Sp	Sa	Wb	Re	So	Sc	To	Gi	Cm	Ac	Ai	Ie	Py	Fx	Fe
11/67	19	8	18	28	17	38	23	31	37	27	17	26	28	22	33	12	4	19

C. P. I. Profile of Father of Subject #8



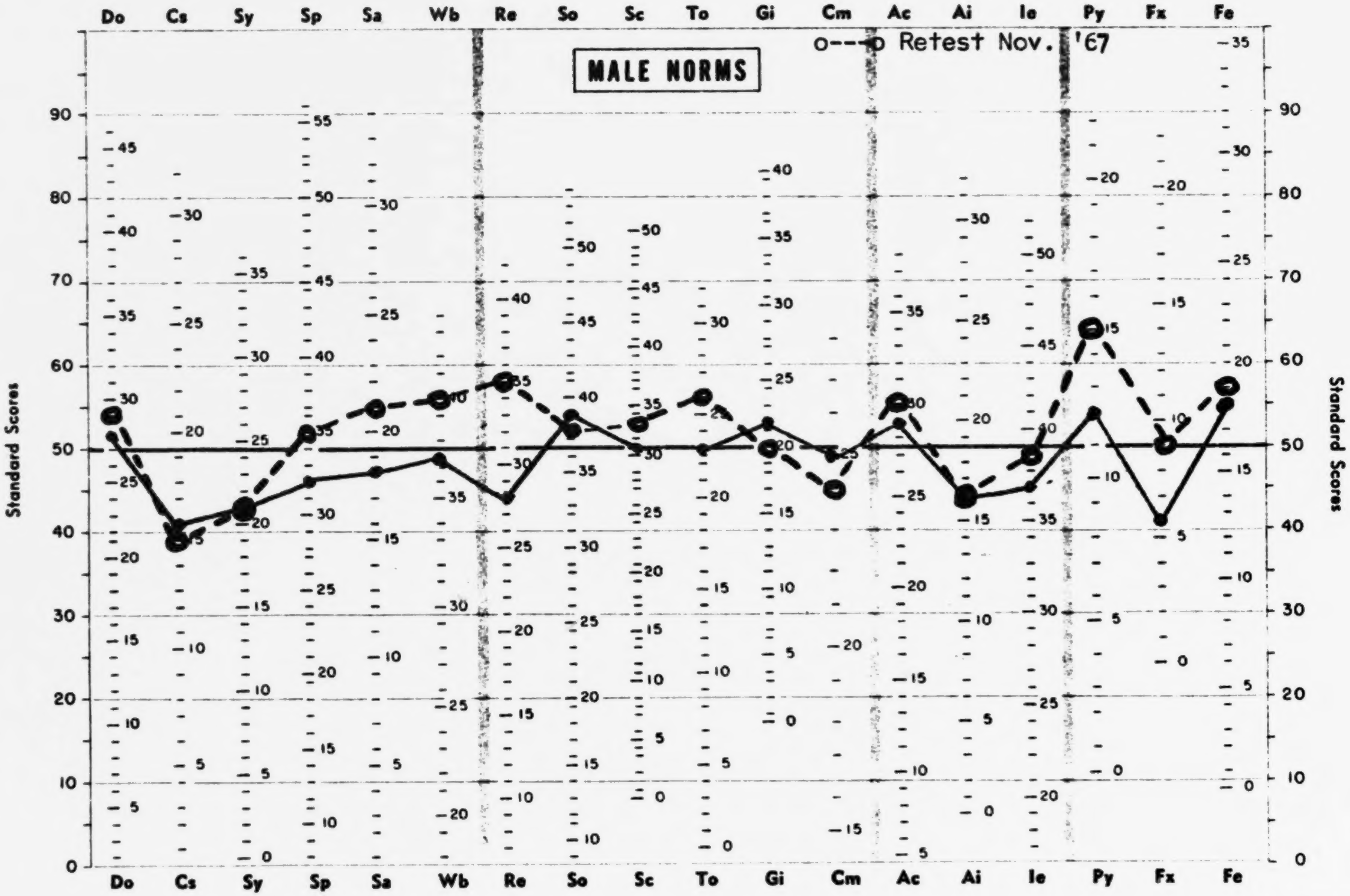
11/67 10 3 3 11 7 20 22 27 16 10 10 22 14 16 19 5 13 24

C. P. I. Profile of Mother of Subject #8



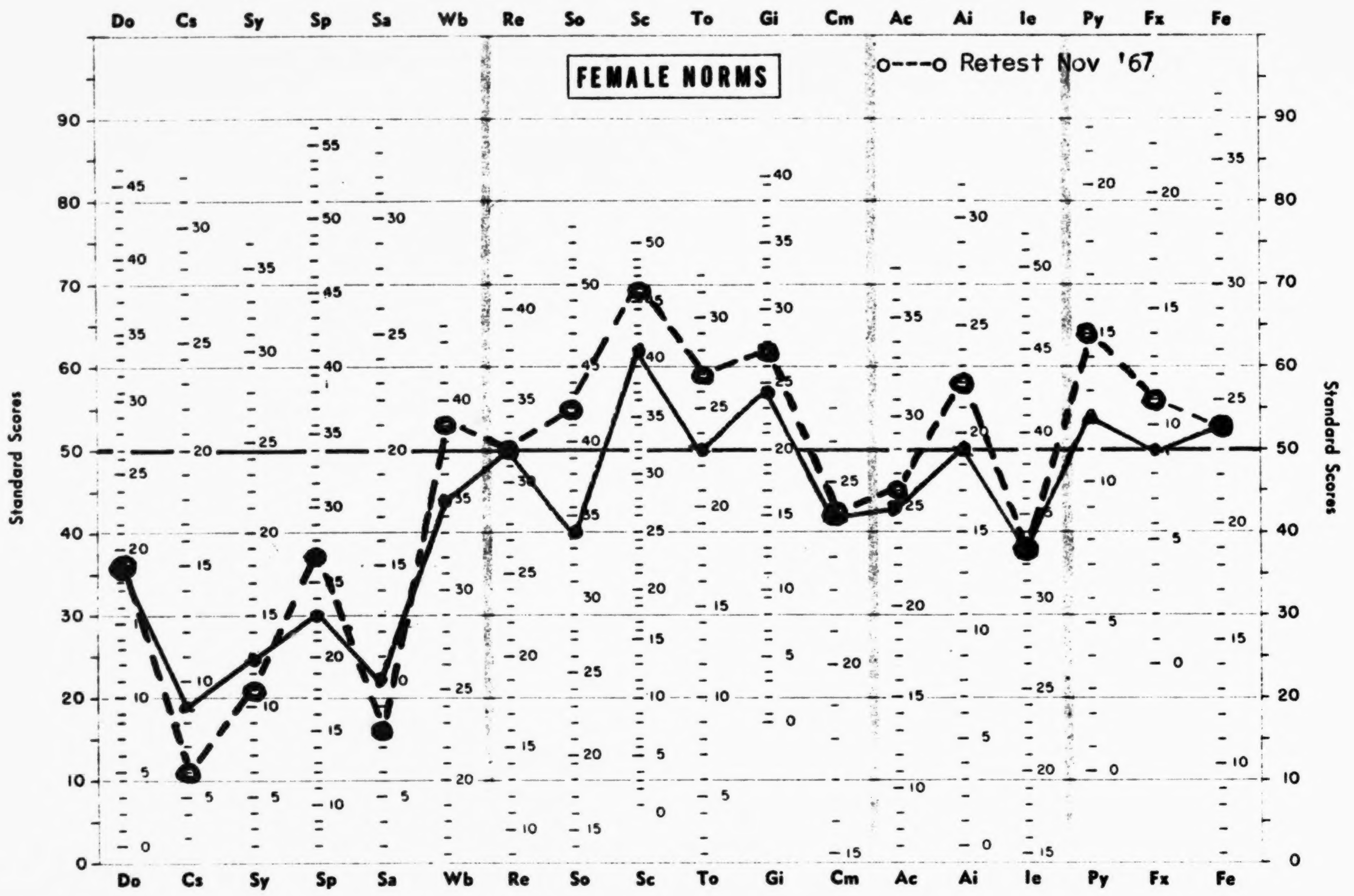
11/67 27 7 17 31 23 30 22 34 24 14 5 26 25 13 35 9 3 27

C. P. I. Profile of Mother of Subject #9



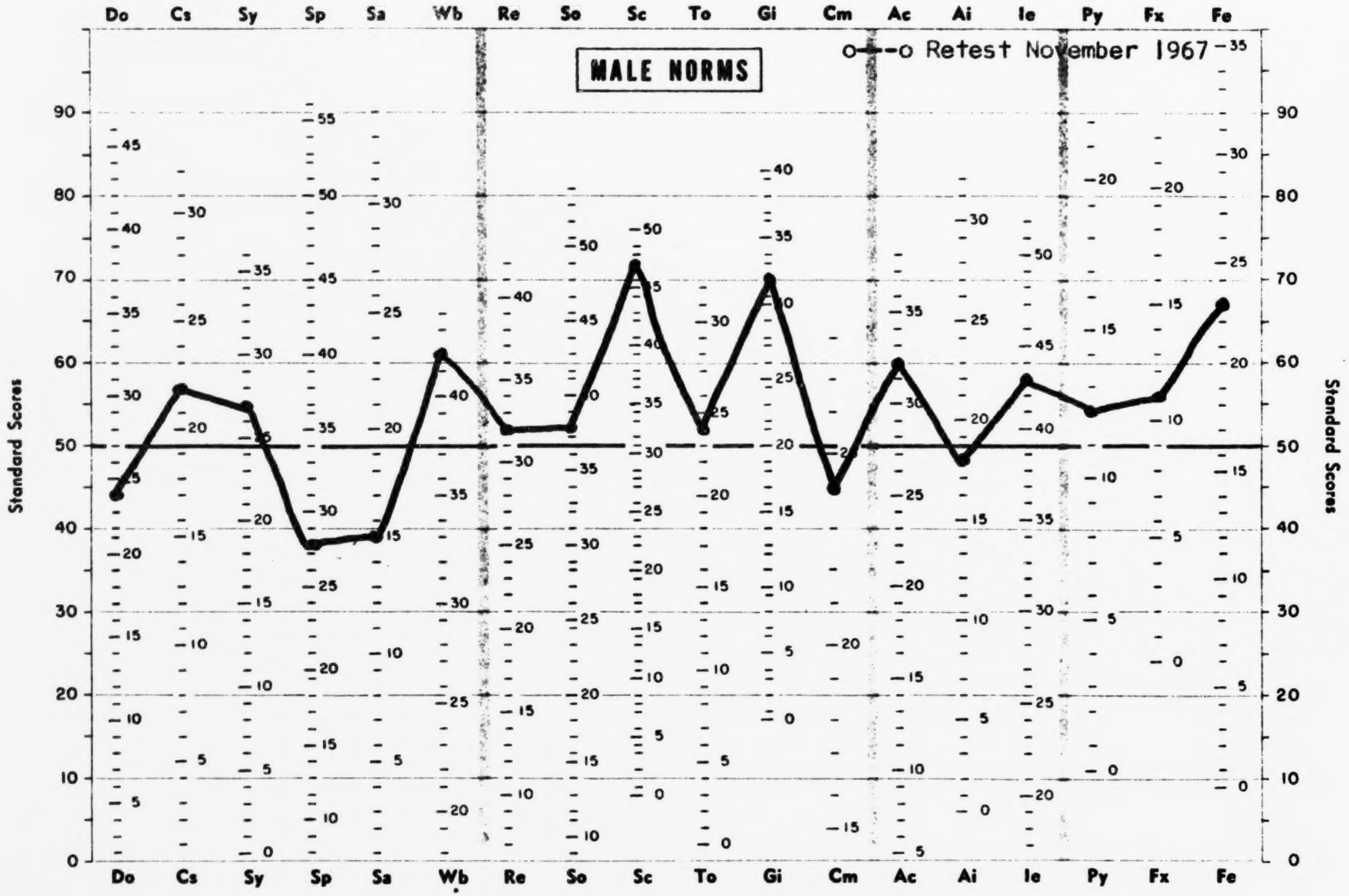
	Do	Cs	Sy	Sp	Sa	Wb	Re	So	Sc	To	Gi	Cm	Ac	Ai	Ie	Py	Fx	Fe
2/67	28	16	21	32	18	37	28	39	31	23	22	25	29	16	37	12	6	18
11/67	29	15	21	35	21	40	35	38	33	26	20	24	29	17	39	15	9	19

C. P. I. Profile of Father of Subject #10



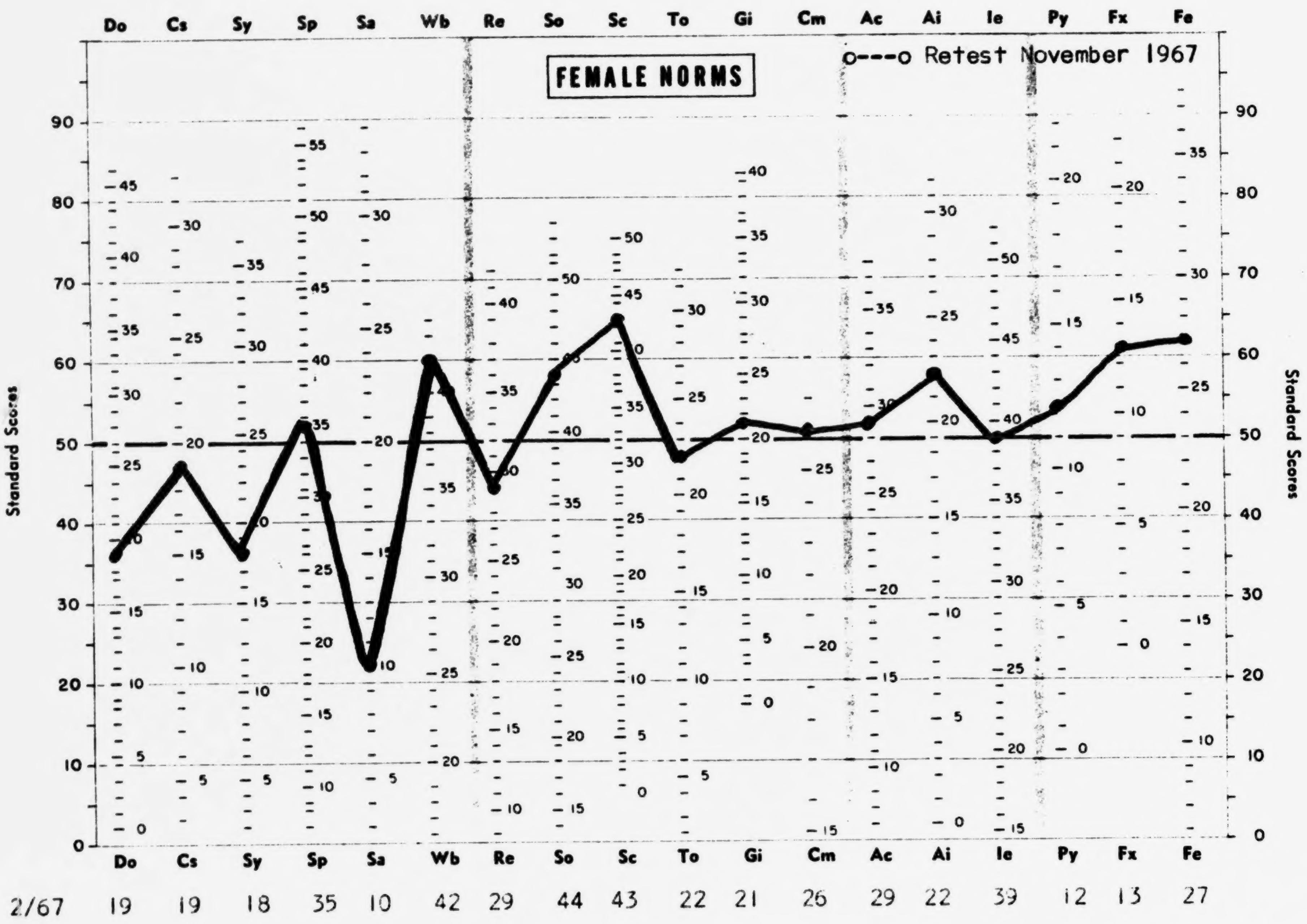
	Do	Cs	Sy	Sp	Sa	Wb	Re	So	Sc	To	Gi	Cm	Ac	Ai	Ie	Py	Fx	Fe
2/67	19	9	13	23	10	35	32	34	41	23	24	24	25	19	33	12	9	24
11/67	20	6	11	27	8	39	32	42	46	27	27	24	26	22	33	15	11	24

C. P. I. Profile of Mother of Subject #10

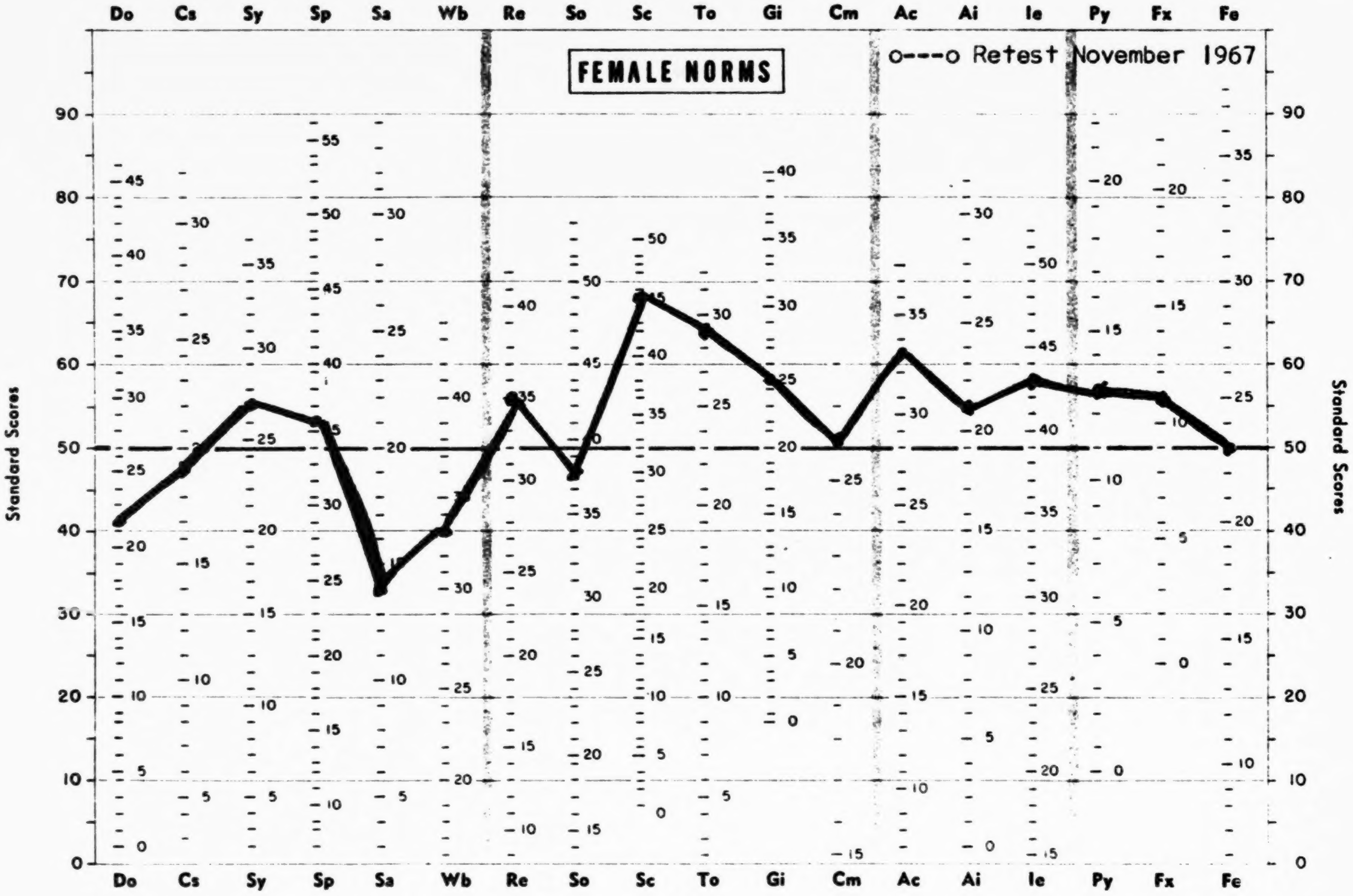


	Do	Cs	Sy	Sp	Sa	Wb	Re	So	Sc	To	Gi	Cm	Ac	Ai	Ie	Py	Fx	Fe
2/67	24	22	27	28	15	42	32	38	47	24	32	24	32	18	43	12	11	23

C. P. I. Profile of Father of Subject #12

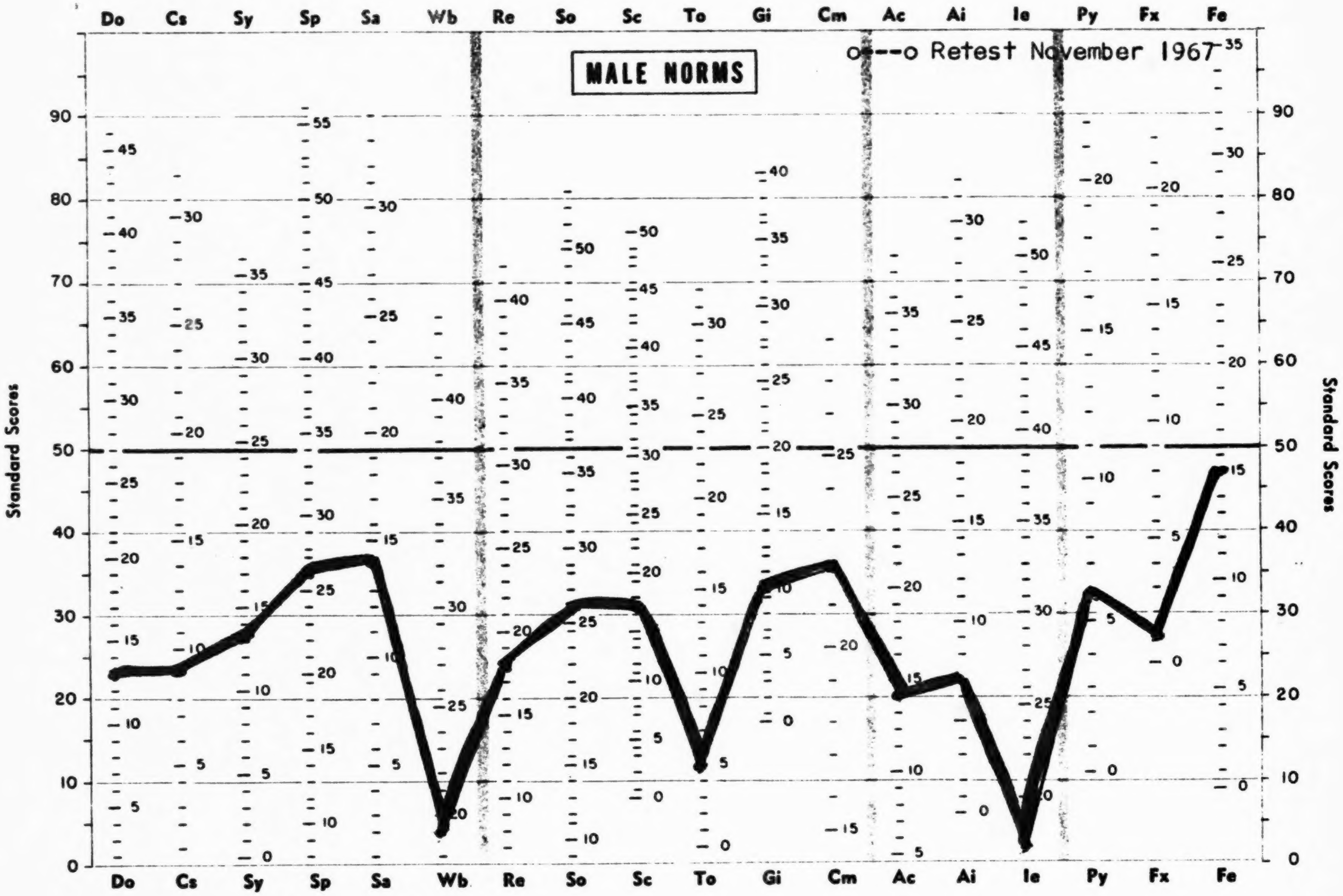


C. P. I. Profile of Mother of Subject #12



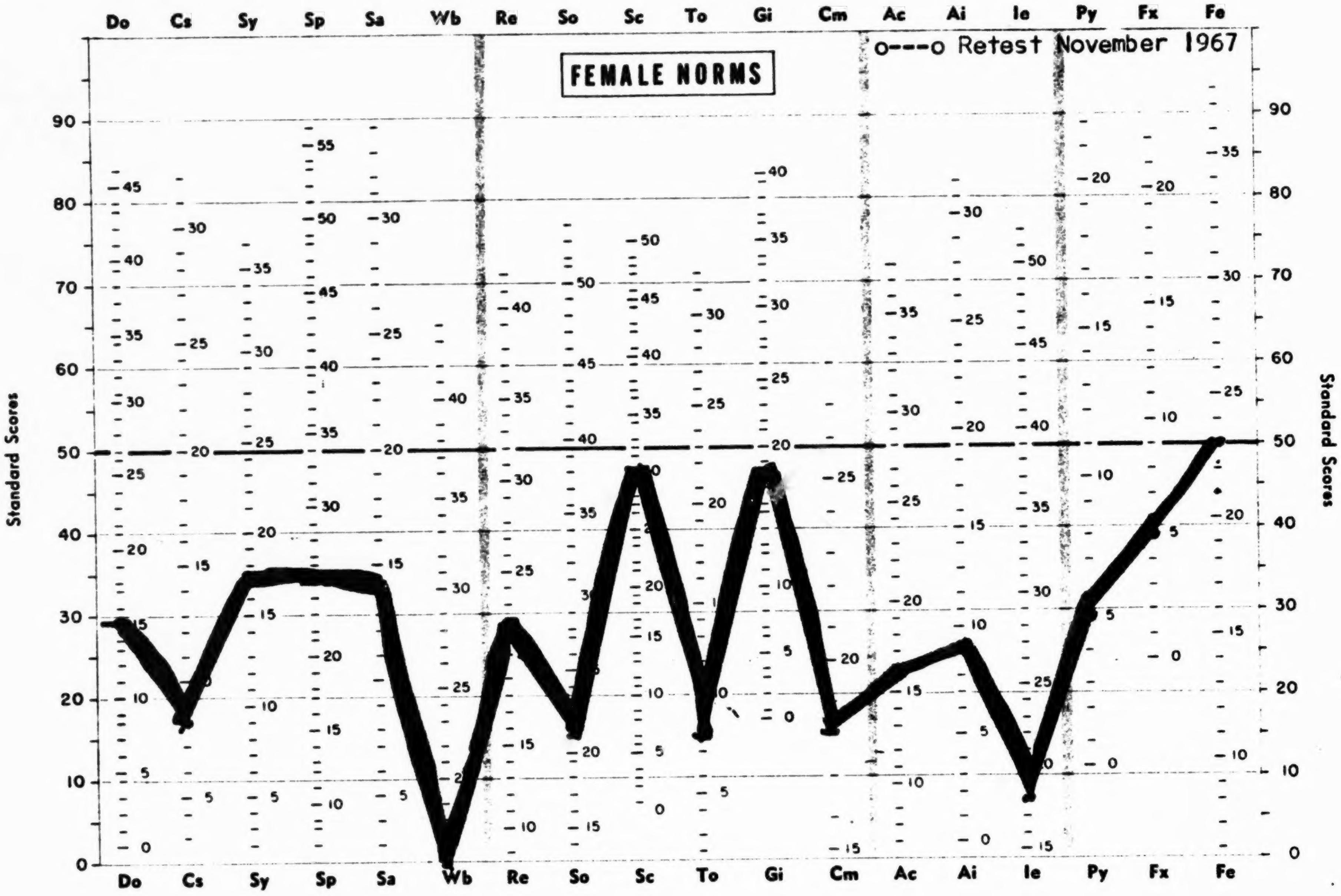
2/67 22 19 27 36 14 33 35 38 45 29 25 26 33 21 43 13 11 23

C. P. I. Profile of Mother of Subject #14



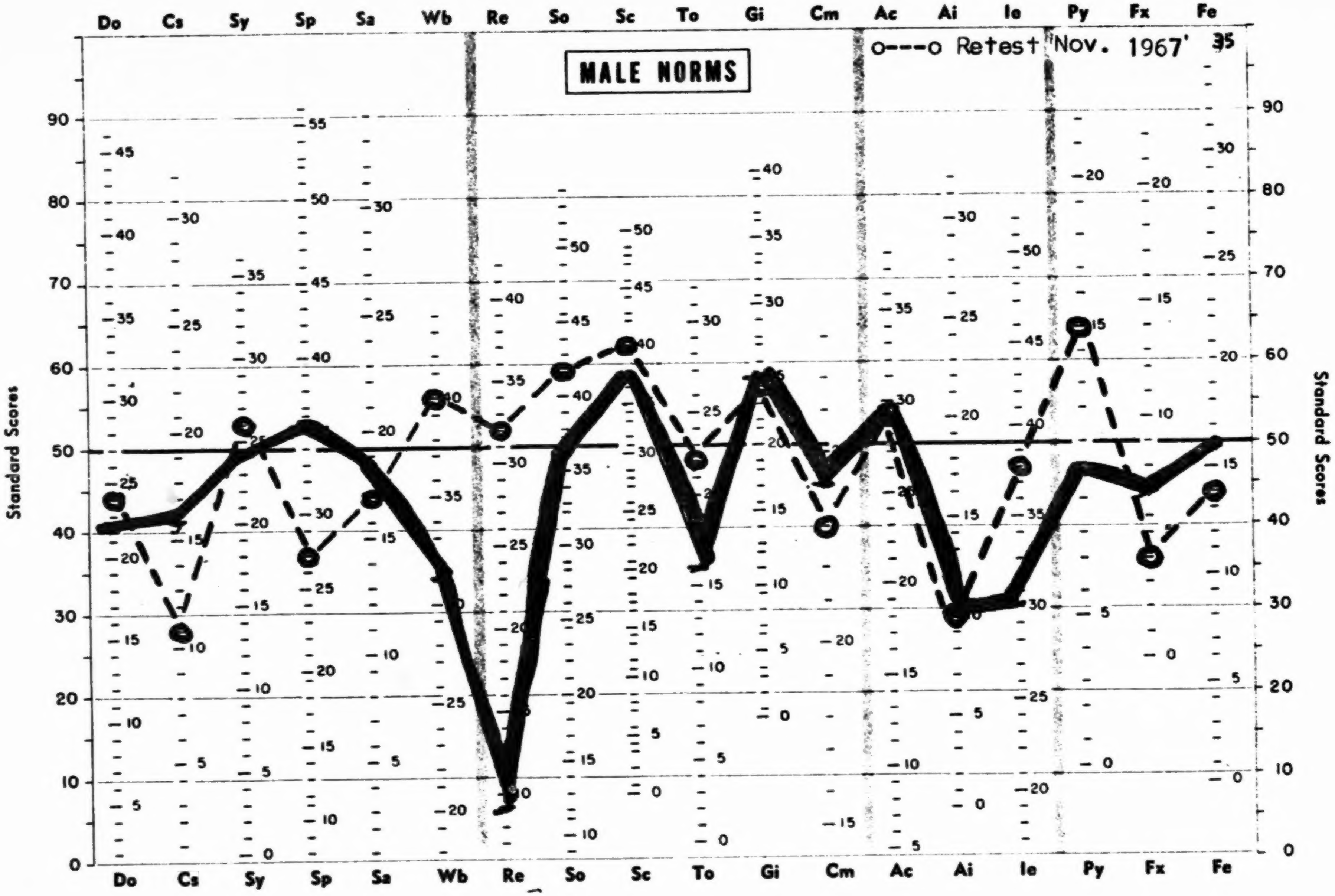
2/67 13 9 13 26 14 19 18 26 17 5 10 22 14 7 17 6 1 15

C. P. I. Profile of Father of Subject #15



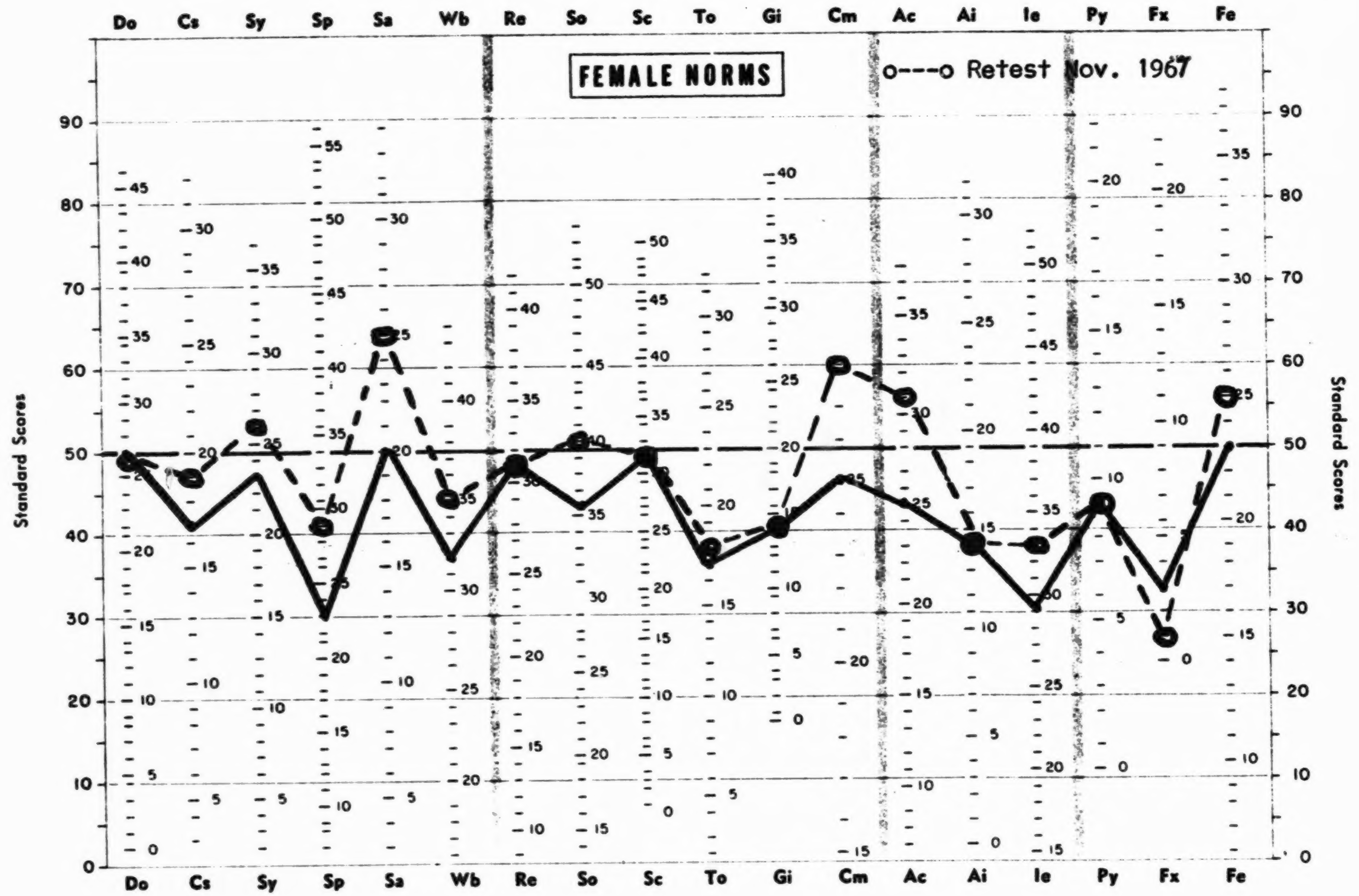
2/67 15 8 17 25 14 15 21 21 30 8 18 18 16 9 18 5 5 23

C. P. I. Profile of Mother of Subject #15



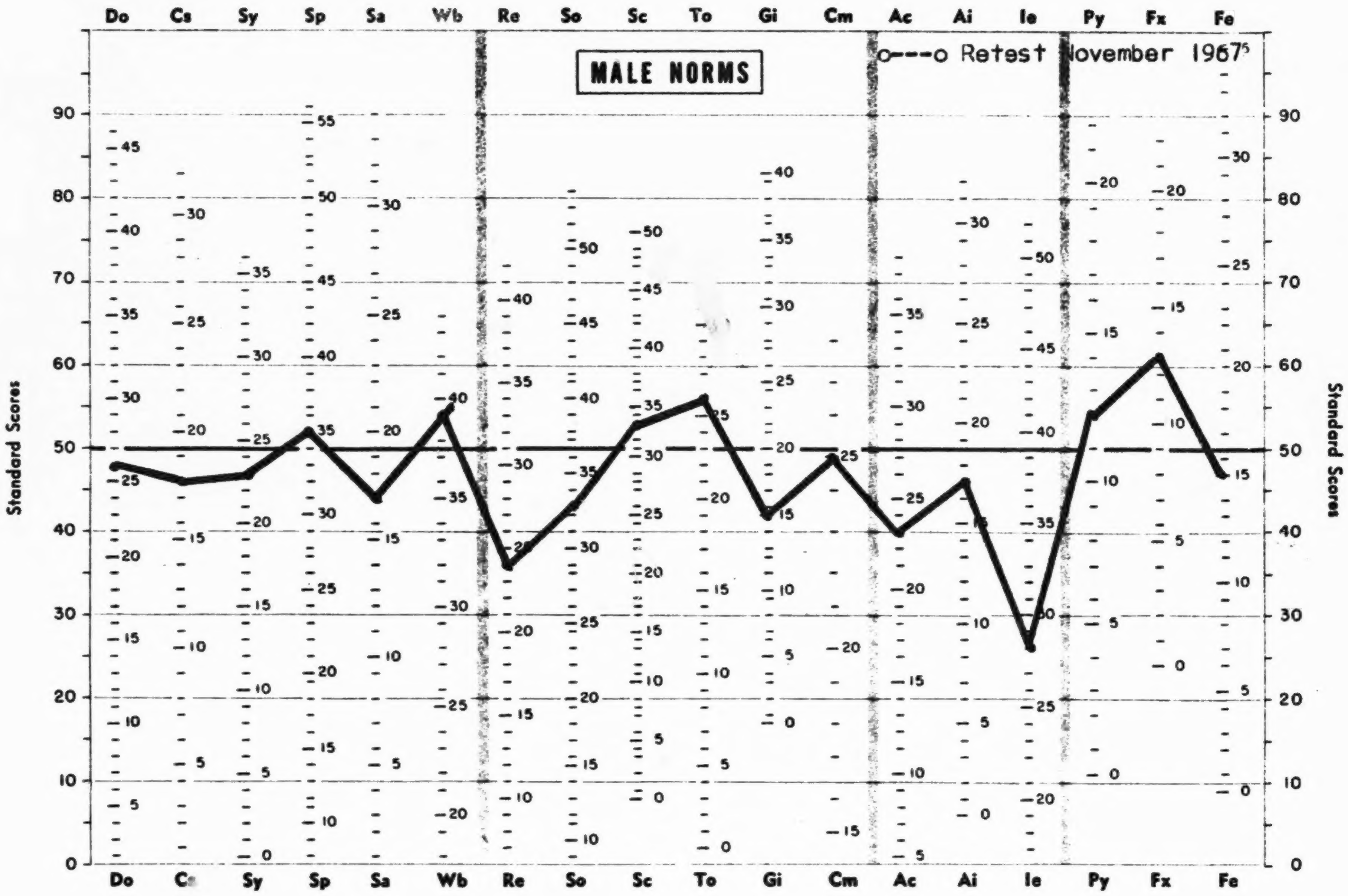
	Do	Cs	Sy	Sp	Sa	Wb	Re	So	Sc	To	Gi	Cm	Ac	Ai	Ie	Py	Fx	Fe
2/67	22	16	24	35	18	31	9	36	37	16	25	24	29	10	30	10	7	16
11/67	24	11	26	27	17	40	32	42	40	23	24	23	29	10	38	15	4	14

C. P. I. Profile of Father of Subject #16



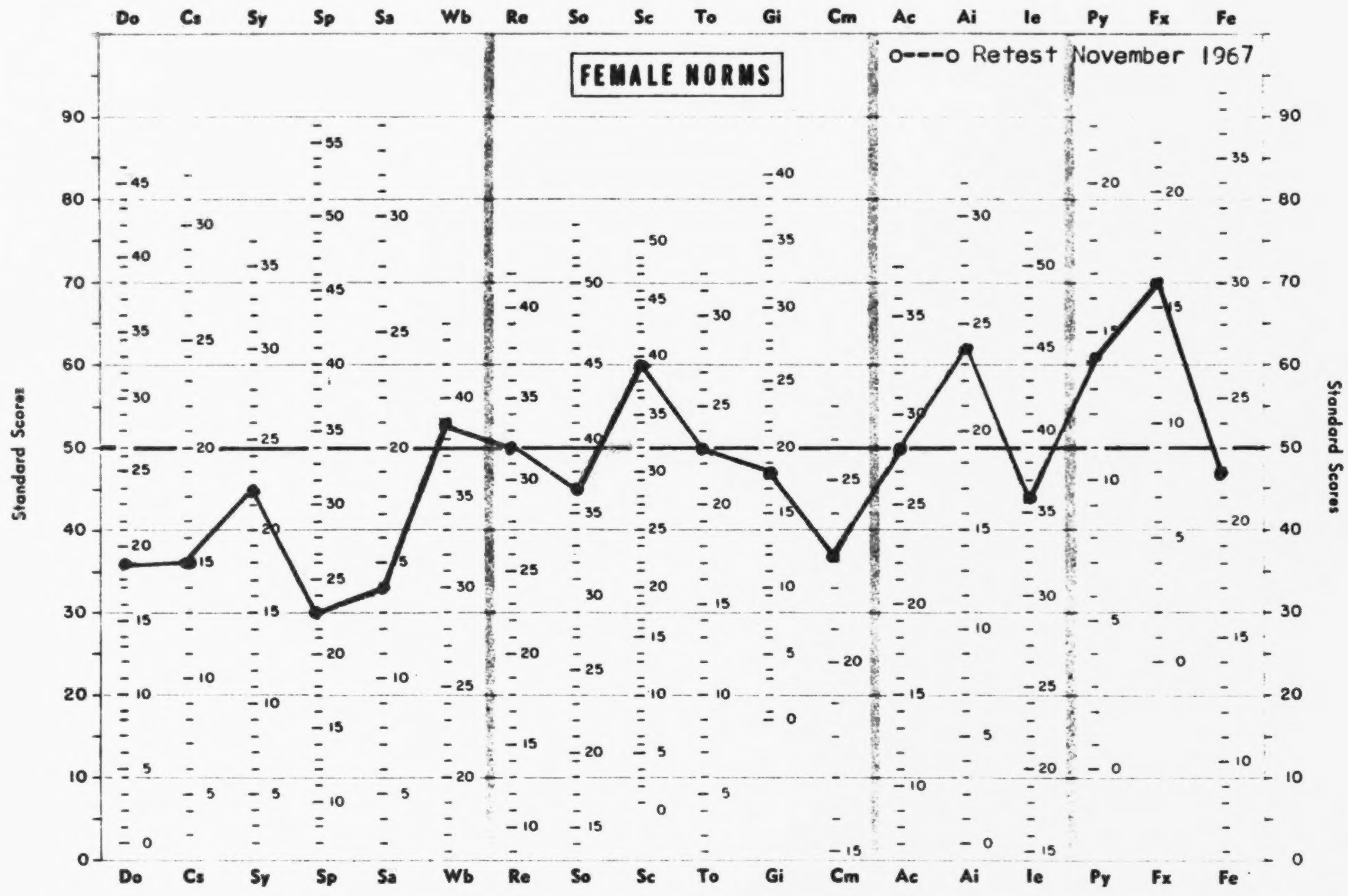
	Do	Cs	Sy	Sp	Sa	Wb	Re	So	Sc	To	Gi	Cm	Ac	Ai	Ie	Py	Fx	Fe
2/67	26	17	23	23	20	32	31	35	31	17	14	25	25	14	29	9	3	23
11/67	26	19	26	29	25	35	31	40	31	18	14	28	31	14	33	9	1	25

C. P. I. Profile of Mother of Subject #16



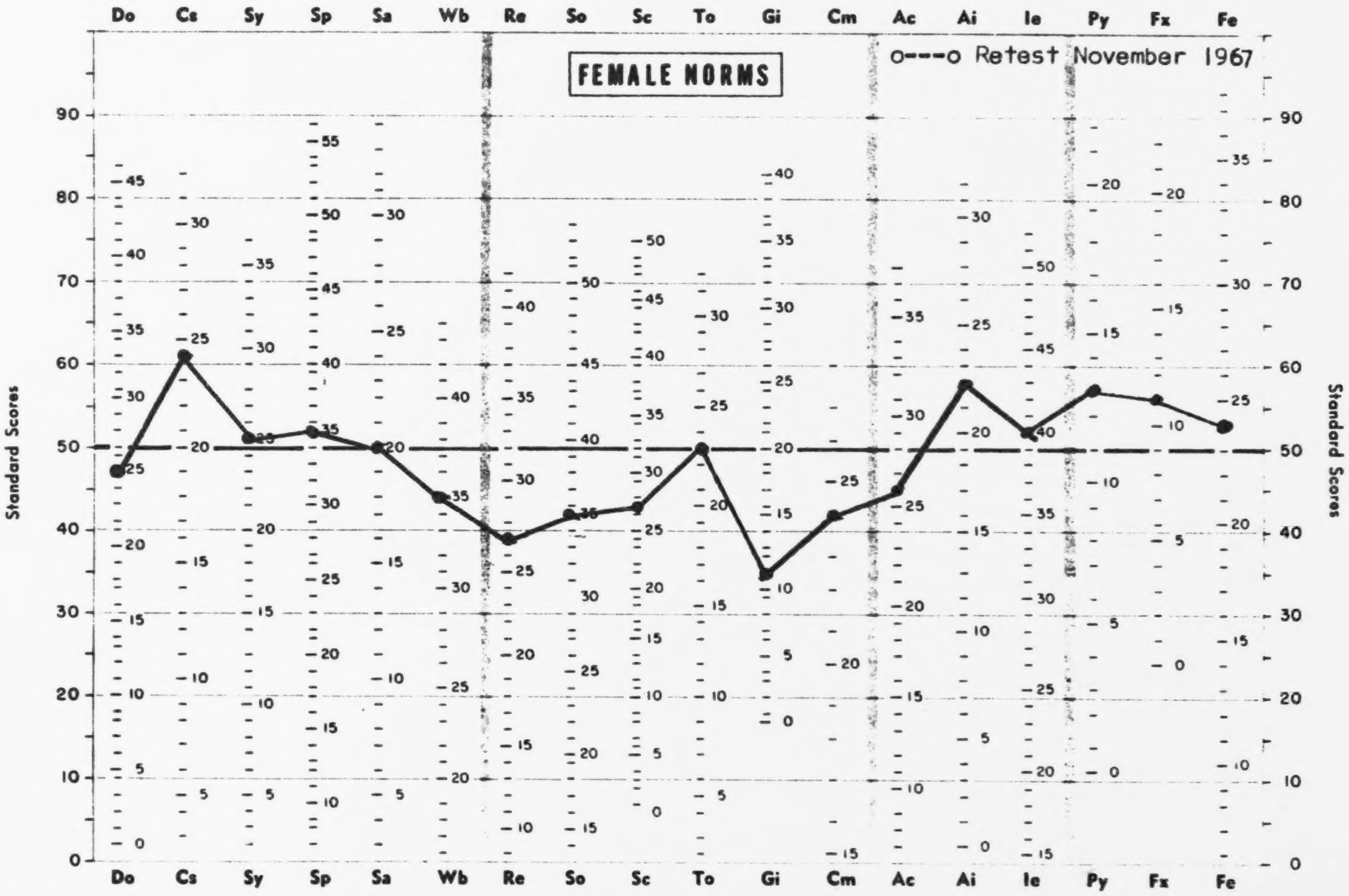
2/67 26 18 23 35 17 39 24 33 33 26 15 25 23 17 28 12 13 15

C. P. I. Profile of Father of Subject #18



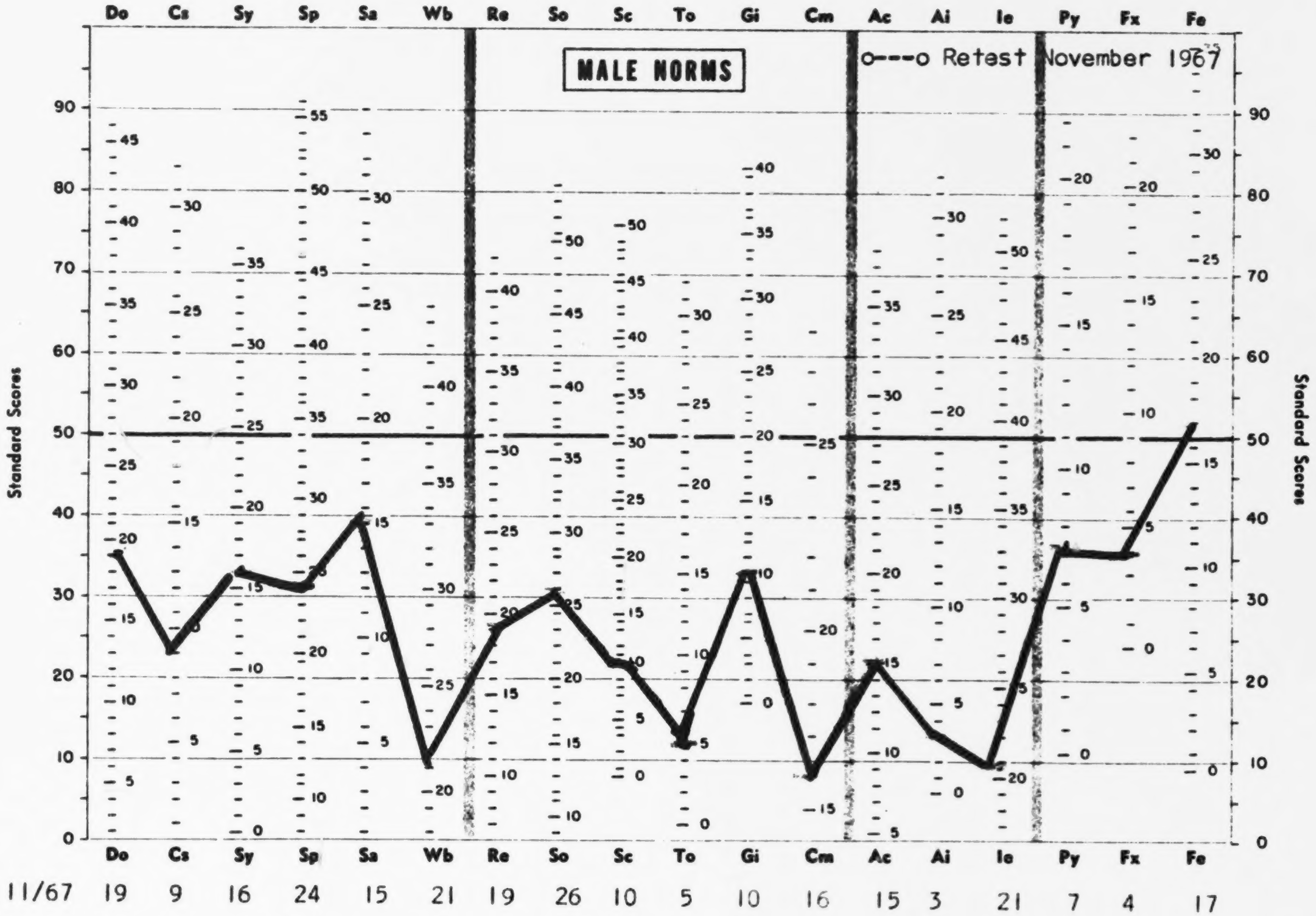
2/67 19 15 22 23 14 39 32 37 39 23 18 23 28 24 36 14 16 22

C. P. I. Profile of Mother of Subject #18

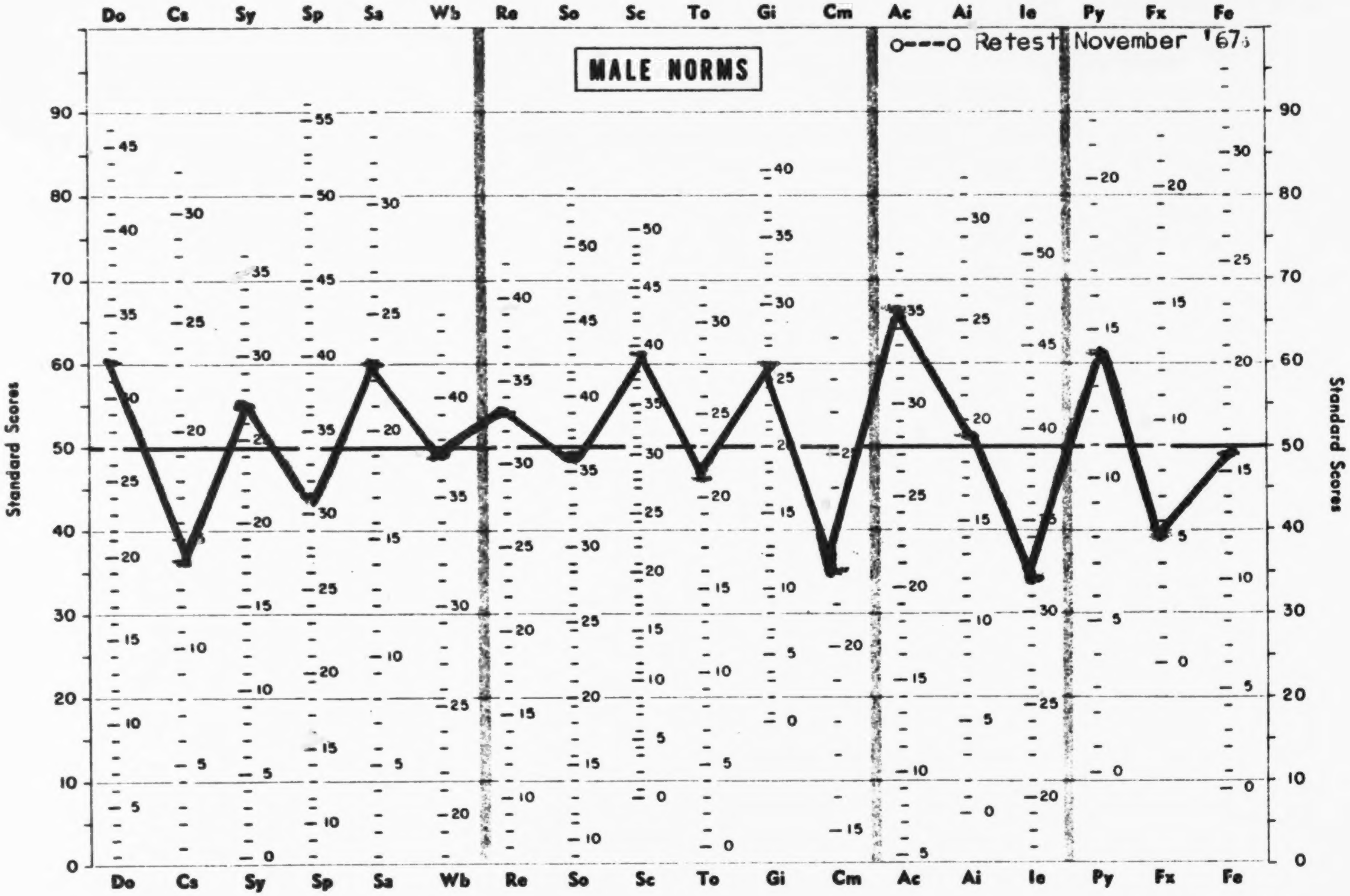


2/67 25 24 25 35 20 35 27 35 27 23 11 24 26 22 40 13 11 24

C. P. I. Profile of Mother of Subject #19

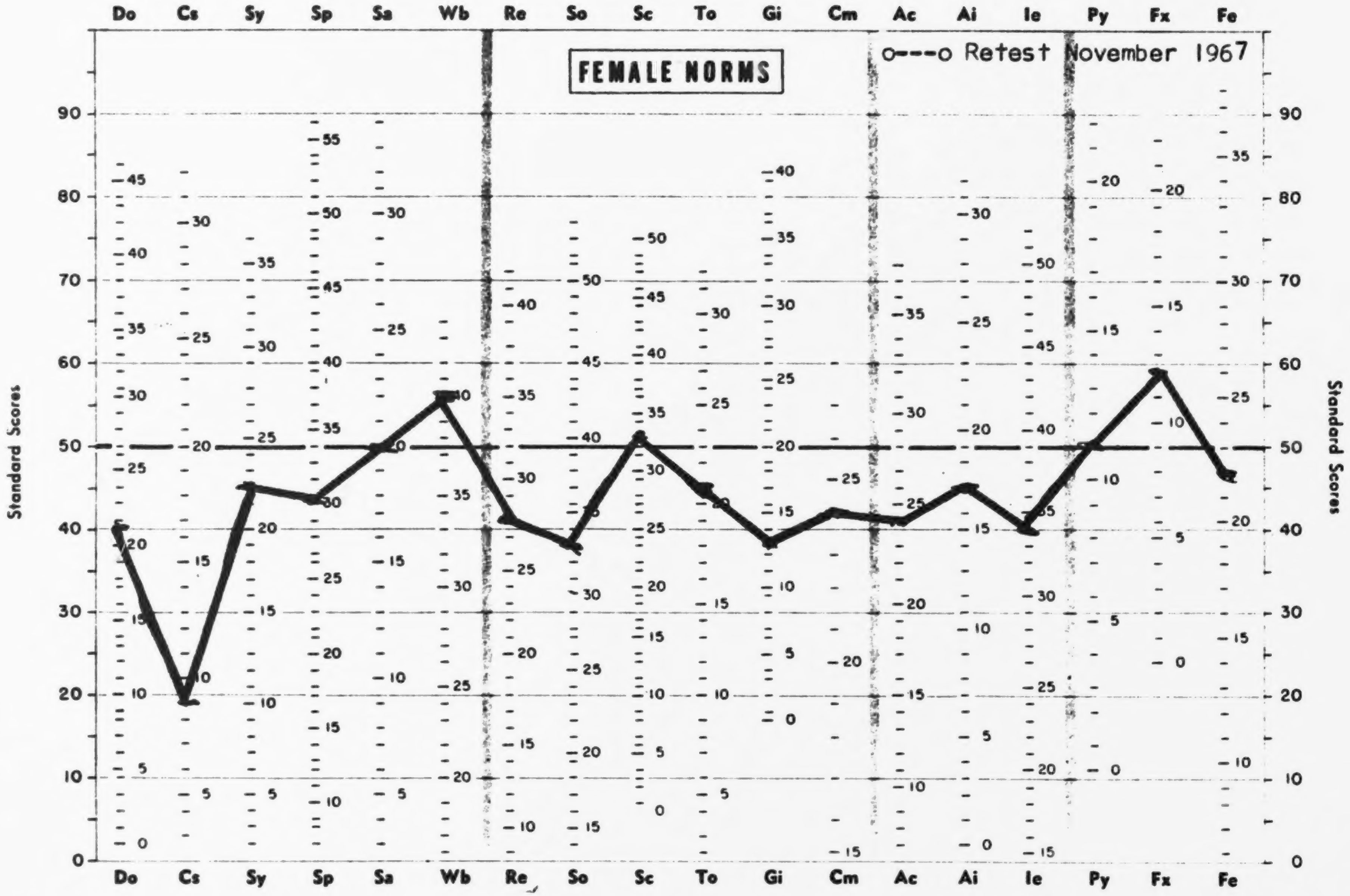


C. P. I. Profile of Father of Subject #20



11/67 32 14 27 31 23 37 33 36 39 21 26 22 35 19 32 14 5 16

C. P. I. Profile of Father of Subject #21



11/67 21 9 22 30 20 41 28 33 33 21 13 24 24 17 34 11 12 22

C.P.I. Profile of Mother of Subject #21

APPENDIX F

THINKING ABOUT YOUR DEAF CHILD

Thinking back to the time when your child entered the Pilot Project please describe changes (good or bad) that have taken place in him in each of the following areas. Also indicate what you think has been the cause of each of these changes.

1. His relationship with you.

   Changes you have seen:

   What you feel has caused these changes:

2. His relationships with other adults.
   Changes you have seen:

   What you feel has caused these changes:

3. His relationships with other children.
   Changes you have seen:

   What you feel has caused these changes:

4. Specific behavior problems.
   Changes you have seen:

   What you feel has caused these changes:

5. His receptive communication (ability to understand what is said to him by others).
   Changes you have seen:

   What you feel has caused these changes:

6. His expressive communication (ability to make himself understood by others).
   Changes you have seen:

   What you feel has caused these changes:

7. His awareness and understanding of what is going on around him.
   Changes you have seen:

   What you feel has caused these changes:

8. His feelings about school.
   Changes you have seen:

   What you feel has caused these changes:

9. His general mood (happiness or unhappiness).
   Changes you have seen:

   What you feel has caused these changes:

10. Other changes you have seen:

    What you feel has caused these changes.

THINKING ABOUT YOUR OTHER CHILDREN

Thinking back to the time when your child entered the Pilot Project please describe changes (good or bad) that have taken place in his brother (s) and/or sister (s) in each of the following areas. Also indicate what you think has been the cause of each of these changes.

1. Feelings toward their deaf brother.
   Changes you have seen:

   What you feel has caused these changes:

2. Relationship with their deaf brother.
   Changes you have seen:

   What you feel has caused these changes:

3. Ability to understand their deaf brother when he attempts to communicate with them.
   Changes you have seen:

   What you feel has caused these changes:

4. Ability to communicate with their deaf brother.
   Changes you have seen:

   What you feel has caused these changes:

5. Other changes you have seen.

   What you feel has caused these changes:

THINKING ABOUT YOURSELF

Thinking back to the time when your child entered the Pilot Project please describe changes (good or bad) that have taken place within yourself in each of the following areas. Also indicate what you think has been the cause of each of these changes.

1. Your feelings about your child.
   Changes you have seen:

   What you feel has caused these changes:

2. Your feelings about your child's deafness.
   Changes you have felt:

   What you feel has caused these changes:

3. Your relationship with your child.
   Changes you have felt:

   What you feel has caused these changes:

4. Your relationship with your husband or wife.
   Changes you have seen:

   What you think caused these changes:

5. Your ability to understand your son when he attempts to communicate with you.
   Changes you have seen:

   What you feel has caused these changes:

6. Your ability to communicate with your son:
   Changes you have seen:

   What you think has caused these changes:

7. What you expect of your son.
   Changes you have seen:

   What you feel has caused these changes:

8. Your hopes for your son.
   Changes you have seen:

   What you feel has caused these changes:

9. Other changes you have seen:

   What you feel has caused these changes:

THINKING ABOUT THE PARENT PROGRAM

Over the past two years our Parent Program has covered many areas. To assist others who will be planning parent education and counseling programs in the future we would like to have your honest evaluation of each of the following:

Area	PLEASE CHECK ONE Very Valuable	Somewhat Valuable	Of little Value	Of No Value
Demonstration of teaching methods by teachers.				
Talk on discipline by school psychologist				
Talk on psychological implications of deafness by school psychologist				
Talk on language development of deaf children				
Film on deafness and talk on deafness and hearing aids by school audiologist				
Panel discussion by deaf adults on what it is like for a deaf child growing up in a hearing family				
Gym demonstration				
Talks by counselors on dormitory life				
Parent discussion and counseling meetings with the family and marriage counselor, Mr. Kirkpatrick				
Reports on results of personality tests by Mr. Kirkpatrick				
Manual communication classes				

Area	Very Valuable	Somewhat Valuable	Of Little Value	Of No Value
Weekly lesson plans and reports on progress and behavior in school				
Teacher-counselor progress reports				
Parent-teacher conferences				
Parent-Counselor-Teacher conferences				
Summer homework				

What part of the Pilot Project program do you feel has proved most helpful to you as a parent?

What part do you feel has proved least helpful to you?

What part of the Pilot Project program do you feel has been most helpful to your son?

What part do you feel has been least helpful to him?

APPENDIX G

CALIFORNIA SCHOOL FOR THE DEAF, RIVERSIDE

Language Course of Study for Pilot Project

OVERALL OBJECTIVES

1. To identify and match the names and pictures of objects or people a given percentage of items for each unit.
2. To write and say or fingerspell after being shown pictures of objects or people a given percentage of vocabulary words listed in each unit.
3. To write, say or fingerspell a given percentage of the listed vocabulary words in simple sentences. (See language principles.)
4. To read and carry out simple commands related to vocabulary in each unit.
5. To give written, verbal or fingerspelled responses to question forms, and to be able to ask questions using language principles. (See language principles.)

CALIFORNIA SCHOOL FOR THE DEAF, RIVERSIDE

Language Course of Study for Pilot Project - 1966

UNIT: BODY

OBJECTIVES:

1. To identify from pictures or from parts pointed out by teacher and match the names of 90% of List A and 75% of List B.
2. To write and say and/or fingerspell from pictures or from parts pointed out by the teacher.
3. To use the names of the body parts in simple sentences.
4. To identify parts of the body of other people and animals.
5. To read and carry out simple commands relating to the body.

VOCABULARY

Nouns			Verbs
List A 90%		List B 75%	90%
head	elbow	eyebrow	brush
eyes	fingers	throat	comb
ears	thumb	forehead	close
nose	chest	eyelashes	open
mouth	waist	eyelids	move
tooth	hips	cheek	hold
tongue	knee	palm	fold
hair	leg	fingernails	point
lips	ankle	thigh	blow
chin	toes	calf	wipe
shoulder	foot	shin	dry
hand	face		clean
arm	body		look
wrist			

UNIT: CLOTHING

OBJECTIVES:

1. To identify and match the names of 60% of objects in list and 75% of verbs.
2. To write and say and/or fingerspell from pictures or objects pointed out by the teacher.
3. To use the names of these objects in simple sentences.
4. To identify these objects.
5. To read and carry out simple commands relating to these objects.

VOCABULARY

Nouns 60%

hat
baseball cap
shirt
tie
jacket
coat
sweater
underwear
undershirt
undershorts
socks
shoes
shoe laces
pockets
buttons
zipper
belt
handkerchief
wallet
tissue
drawer
hook

dress
blouse
skirt
slip
stockings
bows
pins
ring
bracelet
necklace
purse
suit
pajamas
bathrobe
slippers
apron
earrings
glasses
hearing aid
closet
hanger

Verbs 75%

put on
take off
is wearing
tie
untie
zip
iron
button
pin
sew
rip
tear
buy
look at
wash
hang up
put away
put in
polish
fold
pull up

UNIT: EMOTIONS

OBJECTIVES:

1. Match the correct adjective to the picture or the teacher's facial expression.

2. Write the adjectives.

3. Write a simple sentence using the adjectives.

4. Demonstrate the adjective shown on a flash card or fingerspelled or speechread.

5. Use the adjectives in conversation.

VOCABULARY

Adjectives - 50%

happy
glad
pleased
sad
unhappy
mad
upset
worried
proud
ashamed
excited
angry

UNIT: NEEDS AND ADJECTIVES FOR SELF

OBJECTIVES:

1. Match the adjectives to pictures depicting them.
2. Write adjectives shown by pictures depicting them.
3. Use the correct adjective in describing emotions through speech or written language.
4. To express personal needs and feelings through speech, fingerspelling or in written form.
5. To read and dramatize simple sentences using these adjectives.

VOCABULARY

Adjectives for self- 50%

hungry
sleepy
tired
hot
warm
cold
thirsty
dirty
hurt
sore
naughty
bad
clean
right
wrong

UNIT: BIRTHDAY

OBJECTIVES:

1. Match the vocabulary words to pictures depicting them.
2. Write words shown and/or fingerspell from pictures or objects pointed out by the teacher.
3. To use the words in simple sentences.
4. To identify objects used in a birthday celebration.
5. To construct simple sentences related to a birthday party.

VOCABULARY

Nouns 50%

cake
candles
presents
age
years old
birthday
matches
light
ice cream
surprise
"Happy Birthday"

Verbs 50%

sing
blow out
wrap
give

UNIT: FAMILY AND HOME

A. Immediate Family:

OBJECTIVES:

1. To be able to match pictures with names of his family.
2. To say and/or fingerspell and write the names of family members from pictures.
3. To use the names of family members and objects of home environment in simple sentences.
4. To identify from pictures of immediate family and objects of home environment.
5. To read and carry out simple sentences relating to pictures of members of immediate family and objects of home environment.

VOCABULARY

80%

mother
father
sister - name
brother - name
pets - names and identification
man
woman

girl
boy
people
grandfather - special names
grandmother - special names
baby
known relatives

UNIT: FAMILY AND HOME cont'd.

B. Home location

OBJECTIVES:

1. To match pictures with the names of people and objects in the home environment.
2. To say and/or fingerspell and write the names of people and objects in the home environment.
3. To use the names of people and objects in the home environment in simple sentences.
4. To identify from pictures people and objects in the home environment.
5. To read and devise simple sentences relating to pictures of people and object in the home environment.

VOCABULARY
60%

street
city
town
state
address
cup
man
far
big
small
counter
glass
live
colors
move
spoon
knife
pans
go
stay
napkin
plate
fork
coffee pot

Bedroom: 80%

bed
chair
dresser
drawer
pillow
sheets
blanket
bedspread
closet
hanger
toys
clock

Bathroom - restroom: 80%

towels
waste basket
tooth brush
sink
drain
wash cloth
tooth paste
soap
comb
shower curtain
tissues
bathtub
toilet paper
brush
shower
toilet
cabinet
faucet

Hall: 85%

upstairs
downstairs
steps

B. Home Location continued

Garage: 85%

car
board
saw
tools
hammer
bicycle
nails
lawn mower

Outside: 60%

patio
porch
garage
fence
trees
lawn
barbecue
driveway
yard
bushes
dirt
front door
sidewalk
swimming pool
screen door
rocks
back door
swing
roof
grass
flowers
mud

Food: 60%

beans
candy
bacon
cream
jelly
cracker
banana
pepper
soup
lemon
nuts
peanut
fish
pudding
string beans
lunch
bread
cookie
birthday cake
hamburger
peanut butter
gum
milk
pie
sugar
lemonade
orange
tea
pickle
pumpkin
tomato juice
dinner
butter
cocoa
cheese
hot dog
coffee
ice cream
carrot
potato
doughnuts
lollipop (sucker)
orange juice
tomato
plums
sandwich
turkey
supper
cake
apple
coca-cola (coke)
ice
corn
meat
peas
salt
egg
meat loaf
peach
water
prunes
stew
breakfast
sweet potatoes

Toys: 60%

ball
kite
wagon
doll bed
jumping rope
skates
whistle
doll
marble
airplane
doll buggy
paper doll
slide
drum
paid
balloon
doll house
scooter
swing
horn
top
bike
jacks
see-saw
truck

Pets: 60%

puppy
duck
dog
pony
cat
kitten
horse
lamb

UNIT: VACATION

OBJECTIVES:

1. To match pictures which relate to family vacations.
2. To say and/or fingerspell and write places and verbs related to family vacations.
3. To use the places and verbs of family vacations in simple sentences.
4. To identify from pictures places of family vacations.
5. To read and devise simple sentences relating to pictures of family vacations.

VOCABULARY

Places 40%

swimming pool
camp
tent
trailer
ocean
camper
Disneyland
Knotts' Berry Farm
beach
sand
fishing
camping
movies
parks
picnic
playround
mountain
hiking
desert
boat (boating)
zoo
Marineland
Sea World

Verbs 80%-

drive
ride
swim
bike
row
walk
fish
camp
to see

UNIT: SCHOOL

OBJECTIVES:

1. To identify and match from pictures of objects and/or people, or actual objects and people, a given percentage of items listed below.
2. To write and say or fingerspell from pictures, or actual objects and people, a given percentage of vocabulary listed below.
3. To write, say or fingerspell a given percentage of the listed vocabulary in simple sentences.
4. To read and carry out simple commands relating to vocabulary listed below.
5. To give written, verbal or fingerspelled responses to questions, and to be able to ask questions using language principles.

VOCABULARY

A.	Classmates' names	100%
B.	Teachers' names	100%
C.	Counselors' names	100%
D.	Objects:	

- desk
- chalkboard
- pencil
- chalk
- pens
- paper
- eraser
- ruler
- crayons
- chart

UNIT: RECREATION

OBJECTIVES:

1. To identify and match from pictures of recreational objects or the objects themselves, 50% of the vocabulary words listed below.

2. To write and say or fingerspell from pictures of recreational objects, or the objects themselves, 50% of the vocabulary words listed below.

3. To write, say or fingerspell 50% of the vocabulary words listed below in simple sentences.

4. To read and carry out simple commands relating to recreational objects listed below.

5. To give written, verbal or fingerspelled responses to questions, and to be able to ask questions using language principles. (See language principles.)

VOCABULARY

Nouns 50%

Swing
baseball
basketball
softball
volleyball
slide
jungle gym
tag
kickball
puzzles
cards
shorts
gym shoes
T-shirt
game
tag
yo-yo
jacks
movies
T. V.
slides
coloring book
clay
models
cement
paint
water colors

Verbs 50%

Play
throw
catch
run
tag
climb
line up
get in circle
follow
peek
chase
dance
go to
slide
walk
skip
jump

UNIT: GYM

OBJECTIVES:

1. To identify and match from pictures of objects a given percentage of words listed below.
2. To write and say or fingerspell from pictures or actual objects a given percentage of vocabulary listed below.
3. To write, say or fingerspell a given percentage of the listed vocabulary in simple sentences.
4. To read and carry out simple commands relating to vocabulary listed below.
5. To give written, verbal or fingerspell responses to question forms, and to be able to ask questions using language principles.

VOCABULARY

Nouns - 20%

mats
ropes
ball
goals
team
line
bat
goal
start
finish line
turn
stop watch

Verbs - 60%

run
jump
throw
win
lose
finish
bounce
shoot
pass
stand
catch
tag
watch
push
wait your turn

UNIT: FIELD TRIPS

OBJECTIVES:

1. To identify and match from pictures of field trip areas, or the areas themselves, a given percentage of items listed below.
2. To write, say or fingerspell from pictures of field trip areas, or the areas themselves, a given percentage of vocabulary listed below.
3. To write, say or fingerspell a given percentage of the vocabulary words listed below in simple sentences.
4. To read and carry out simple commands relating to field trips in vocabulary listed below.
5. To give written, verbal or fingerspelled responses to questions, and to be able to ask questions using language principles.

VOCABULARY

Areas of School 100%

A. Dormitory:

bathroom
counselors
room
blinds

B. Dining Room:

table
chairs

C. Play Area:

Same as recreation

D. Gym and Swimming Pool: 60%

deep end
deck
diving board
glide
kick
float
jump
change clothes
shallow end
curb
P.E. Teacher's name
push
drown
hold breath
race
ladder
spit
swim
splash
dive
glide

UNIT: COMMUNITY

OBJECTIVES:

1. To identify and match from pictures of objects, and/or people or actual objects, a given percentage of items listed under each subtitle.

2. To write and say or fingerspell from pictures or actual objects a given percentage of vocabulary listed in each subtitle.

3. To write, say or fingerspell a given percentage of the listed vocabulary in simple sentences.

4. To read and carry out simple commands relating to vocabulary under each subtitle.

5. To give written, verbal or fingerspelled responses to question forms, and to be able to ask questions using language principles.

VOCABULARY

A. Helpers: 85%

1. Policeman

   - police car
   - cap
   - motorcycle
   - gun
   - jail
   - badge
   - uniform
   - club
   - ticket
   - police station

2. Fireman

   - fire hat
   - boots
   - alarm
   - fire
   - match
   - not safe
   - put out
   - hose
   - ladder
   - fire drill
   - smoke
   - burn
   - danger

3. Milkman

   - bottle
   - milk
   - cream
   - butter
   - carton
   - cow
   - to milk
   - ice cream

COMMUNITY continued

4. Grocer

Market
buy
fruits
meat
supermarket
cash register
cashier
store
sell
vegetables
groceries
bag
money

5. Doctor, Nurse, Dentist, Paperboy

Talk about in general

B. Places: 85%

park
zoo
school
mountains
beach
downtown
movies
stores
desert

C. Transportation: 85%

airplane
train
bus
car
bike
boat
taxi
truck
motorcycle

Verbs

drive
ride
hit
accident
obey

D. Animals: 85%

wild
tame

Verbs

bark
growl
crawl
pet
fly

APPENDIX H

Dissemination of Information on the Pilot Project for Seriously Emotionally Disturbed Deaf Boys at the California School for the Deaf at Riverside

The following presentations were made by the authors during the Pilot Project Grant period, July 1, 1966 to June 30, 1969, and included discussion and pictorial presentation of the Project program:

Convention of the California Association of Teachers of the Deaf and Hard of Hearing	Disneyland Hotel Anaheim, California
Convention of American Instructors of the Deaf	West Hartford, Connecticut
California Educational Research Association	Berkeley, California
Convention of the California Association of Teachers of the Deaf and Hard of Hearing	Hilton Hotel San Francisco, California
Conference on the Multi-handicapped	Ball State University Muncie, Indiana
Conference of Executives of American Schools for the Deaf	Washington, D. C.
C. E. C. Conference	Jack Tar Hotel San Francisco, California
California School for the Blind	Berkeley, California
A. G. Bell Convention	Hilton Hotel San Francisco, California
Title Six Project for Multi-Handicapped Children	Azusa Unified School District Azusa, California
Curriculum Workshop for Administrators	San Fernando Valley State College Northridge, California
Special Study Institute: Visually Impaired Children with Multiple Handicaps	Del Webb's Townehouse Motor Hotel San Francisco, California
Leadership Training Program in the Area of the Deaf	San Fernando Valley State College Northridge, California

California Educational Research Association	Los Angeles, California
Captioned Films for the Deaf Symposium	University of Nebraska Lincoln, Nebraska
Workshop for Psychologists Working with the Deaf	New York University New York City, New York
Language Curriculum Workshop	Wisconsin State Department of Public Instruction Wisconsin Dells, Wisconsin
Special Study Institute: Multiply Handicapped Mentally Retarded Deaf Child	Lewis and Clark College Portland, Oregon
Western Psychological Assn.	Vancouver, B. C.

REFERENCES

Ackerman, N. W. "Toward an Integrative Therapy of the Family", American Journal of Psychiatry, 1958, 114, 727-733.

American Annals of the Deaf, 112:484, May 1967.

Babbidge, H. D., et al, Provision for the Multiply Handicapped. Education of the Deaf, A Report to the Secretary of Health, Education, and Welfare by his Advisory Committee on the Education of the Deaf, Washington, D.C.: Department of Health, Education, and Welfare, 1965, 17-18.

Bijou, S. W. An empirical concept of reinforcement and functional analysis of child behavior. Journal of Genetic Psychology, 1964, 104.

Calvert, D. R. A Report on Multi-Handicapped Deaf Children in California, Division of Special Schools & Services. California Department of Education, Sacramento, California, 1968.

Davis, H. and Silverman, S. R. Hearing and Deafness. New York: Holt, Rinehart, and Winston, 1960, p. 416.

Doctor, P. V. Section on Multiple Handicaps, Proceedings of the 39th Meeting of the Convention of American Instructors of the Deaf, Colorado Springs, Colorado, 1959, pp. 33-67.

Frampton, M. E., & Rowell, H. G. Education of the Handicapped. Volume 2, New York: World Book Company, 1940, p. 328.

Haring, N. E. & Phillips, E. Educating Emotionally Disturbed Children. New York: McGraw-Hill Book Co., 1962.

Hewett, F. Educational engineering with emotionally disturbed children. Exceptional Children, 1967, 33, Pp. 459-467.

Hewett, F. The Emotionally Disturbed Child in the Classroom. Rockleigh, N. J.: Allyn and Bacon, Inc., 1968.

Hobbs, N. Helping disturbed children: psychological and ecological strategies. American Psychologist, 1966, 21, 1105-1115.

Kendall, M. G. & Smith, B. B. Tables of Random Sampling Numbers. In Herbert Arkin & Raymond R. Colton Tables for Statisticians. New York: Barnes & Nobles, Inc. 1968, Pp. 158-161.

Kirkpatrick, A. Report on Parent Counseling Program for Pilot Project Parents (unpublished) 1968.

Kuethe, J. L. The pervasive influence of social schemata. Journal of Abnormal Psychology, 1965, 70, 457-461.

Lippman, H. S. Treatment of the Child in Emotional Conflict. New York: McGraw-Hill, 1956.

Marascuilo, L. A. & McSweeney, M. Nonparametric post hoc comparisons for trend. Psychological Bulletin, 1967, 67 (2), 401-415.

Medley, D. M. & Mitzel, H. E. A technique for measuring classroom behavior. Journal of Educational Psychology, 1958, 49 (2), 86-92.

Mulholland, A. M. The Multiple-Handicapped Child-The Brain-Injured Child, Proceedings of the 40th Meeting of the Convention of American Instructors of the Deaf, Salem, Oregon, 1961, 74-80.

Schaefer, E. S. & Bell, R. Q. Development of a parental attitude research instrument. Child Development, 1958, 29, 339-361.

Siegel, S. Nonparametric statistics. New York: McGraw-Hill, 1956.

Skinner, B. F. Operant behavior. American Psychologist, 1963, 18, 503-515.

Vernon, M. Multiply Handicapped Deaf Children: A Study of the Significance and Causes of the Problem. unpublished doctoral dissertation, Claremont Graduate School, Claremont, California, 1966, 207 pp.

Weinstein, L. Social schemata of emotionally disturbed boys. Journal of Abnormal Psychology, 1965, 70, 457-461.

Whelen, R. J. & Haring, N. G. Modification and maintenance of behavior through systematic application of consequences. Exceptional Children, 1966, 32, 281-89.

Withrow, F. B. Jr. A Proposed Program for Emotionally Disturbed Children. Proceedings of the International Congress on Education of the Deaf, 352-353, 1963.